Waimakariri District Council

Agenda

Tuesday 2 December 2025
9.00am

Council Chamber
215 High Street
Rangiora

Members:

Mayor Dan Gordon
Deputy Mayor Philip Redmond
Cr Tim Bartle
Cr Brent Cairns
Cr Wendy Doody
Cr Tim Fulton
Cr Jason Goldsworthy
Cr Bruce McLaren
Cr Niki Mealings
Cr Shona Powell
Cr Joan Ward

WAIMAKARIRI
DISTRICT COUNCIL

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The Mayor and Councillors
WAIMAKARIRI DISTRICT COUNCIL

An ordinary meeting of the Waimakariri District Council will be held in the Council Chamber, Rangiora Service Centre, 215 High Street, Rangiora, on **Tuesday 2 December 2025** commencing 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. ACKNOWLEDGEMENTS

4. CONFIRMATION OF MINUTES

4.1 **Minutes of a meeting of the Waimakariri District Council held on Tuesday 4 November 2025** *10 – 34*

RECOMMENDATION

THAT the Council:

(a) **Confirms,** as a true and correct record, the circulated Minutes of the Waimakariri District Council meeting held on Tuesday 4 November 2025

4.2 Matters Arising.

5. DEPUTATIONS AND PRESENTATIONS

5.1 **Ngaire Wilkinson and Virginia Gendie will speak in relation to a potential Stormwater Management Area (SMA) in Mill Road, Ohoka.**

The Council propose to consider a report in February 2026.

6. ADJOURNED BUSINESS

Nil.

7. WATER SERVICES RELATED REPORT

7.1 **Woodend Box Drain Treatment Facility Upgrade Project** – Jason Recker (Stormwater and Waterways Manager) and Kirtina Ismail (Waterways Engineer)

RECOMMENDATION *35 – 235*

THAT the Council:

(a) **Receives** report No. 251016197189.

(b) **Authorises** Council staff to progress the Woodend Box Drain Treatment Facility Upgrade Project to the design stage, based on the recommended solution of an offline first flush basin and wetland which currently has an estimated cost of $1,419,000 for design and construction.

(c) **Notes** that the total project cost of $2,451,659 (when including the land acquisition and other costs to date) can be funded by $2,215,750.00 from Box Drain Improvements (PJ 101736.000.5123) with an additional $236,000.00 from Woodend Global Consent Implementation Works budget to be allocated to this project.

(d) **Notes** that the total combined budget of $2,451,750 is funded by multiple sources being the sale of the property once the project is complete ($600,000), Better of Funding ($1,100,000) and through loan funds/rates ($751,750).

(e) **Notes** that Ngai Tūāhuriri Rūnanga have had a representative involved in the feasibility stage and will also be involved in reviewing and providing feedback on the next design phases.

(f) **Notes** that the preliminary and detailed design are intended to be undertaken by an external consultant, and that a request for proposal will be issued following Council approval to proceed to the design stage.

(g) **Notes** that this work will utilise existing Coastal Urban Drainage capital works budgets from the Woodend Box Drain Improvements Project and the Woodend Global Consent Implementation Works.

(h) **Notes** that Council staff will be requesting realignment of budgets as part of the 2026/27 Annual Plan process.

(i) **Notes** that if the above recommendations are approved, the staff will progress to tendering and awarding the design components of the project in keeping with the Delegations Manual, but the construction of the project will not commence until the Council has approved the construction tender award.

(j) **Circulates** this report to the Woodend-Sefton Community Board for information.

8. REPORTS

8.1 **Rangiora Eastern Link: Next Steps to Revise Concept Design and Approval of Expenditure** – Rob Kerr (Rangiora Easten Link Programme Manager)

RECOMMENDATION *236 – 240*

THAT the Council:

(a) **Receives** Report No. 251105210048.

(b) Approves bringing forward $255,000 from the FY26/27 Rangiora Eastern Link budget (PJ 102432.000.5133) which has an available budget of $5,000,000 (of which 51% is assumed to be subsidised) to fund additional design work and enable the project to continue to progress.

(c) **Notes** that this additional expenditure will not be subsidised by NZTA as it is exceeding the Business Case and Concept Design budget, and approval has not yet been given for the remainder of the spend.

(d) **Notes** that a report will be brought to the February Council meeting with an updated cost estimate, a recommended draft Business Case for sending to NZTA and a full summary of the financial effects.

8.2 **Council Submissions to Central Government Consultations for September and October 2025** – Sylvia Docherty (Strategy and Business Manager)

RECOMMENDATION *241 – 251*

THAT the Council:

(a) **Receives** Report No. EXT-39/251116217091.

(b) **Endorses** the attached submission made on 30 September 2025 to the Government's Justice Committee regarding Antisocial Road Use Legislation Amendment Bill (attachment i / 250919179110), noting that the draft submission was shared with the Council on 19 September 2025 for review and feedback.

(c) **Endorses** the attached submission made on 3 October 2025 to the Government's Local Government Commission regarding the Draft Standard Code of Conduct developed for the Local Government (System Improvements) Bill (attachment ii / 250923181180), noting the draft submission was shared with the Council on 24 September 2025 for review and feedback.

(d) **Notes** both Council submissions were shared with Elected Members in draft form prior to final review and signature by the Mayor and Chief Executive.

(e) **Notes** proposed legislative changes are anticipated to be available for consultation within the next two months that will impact local government including phase 3 of the resource management reform, emergency management, building act amendment and local government infrastructure funding and financing (development levies).

(f) **Circulates** the report and attached submissions to the community boards for their information.

8.3 **Adoption of Community Board Submissions on Resource Management Matters Policy** – Dianna Caird (Senior Policy Analyst)

RECOMMENDATION *252 – 259*

THAT the Council:

(a) **Receives** Report No. 250814150730.

(b) **Adopts** the Community Board Submissions on Resource Management Matters Policy.

(c) **Notes** the Policy is intended to provide a clear and transparent process for Community Boards to access the funds provided by the Council when submitting on Resource Management matters.

(d) **Notes** the draft Policy was presented at an All-Boards workshop 23 July 2025.

(e) **Notes** that if a Community Board chooses to pursue further action after a consent hearing, it must submit a more detailed application

(f) **Notes** the Policy will be reviewed in 1 year to assess the effectiveness of the Policy.

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

8.4 **Report Adoption of Elected Member Expenses Policy** – Sarah Nichols (Governance Manager)

RECOMMENDATION *260 – 271*

THAT the Council:

(a) **Receives** Report No. 251121221669.

(b) **Approves** the Elected Member Expenses Policy to 30 June 2026 (Trim 251121221672).

(c) **Notes** a copy of the updated adopted Policy is sent to the Remuneration Authority.

(d) **Circulates** a copy of this report and the approved Expenses Policy to all Community Boards for their reference.

8.5 **Elected Member Pecuniary Interests Register** – Sarah Nichols (Governance Manager)

RECOMMENDATION *272 – 281*

THAT the Council:

(a) **Receives** Report No. 251113216245.

(b) **Notes** members supplied information directly to the Governance Manager to enable Register compilation no later than 24 November 2025.

(c) **Notes** the Register of Interests will be placed on the Council website.

(d) **Notes** a copy of this report will be circulated to the Community Boards, who are also subject to the Register.

(e) **Notes** the updated Elected Members Pecuniary Interests Register will be uploaded to the Council website prior to 20 December 2025.

8.6 **Oxford-Ohoka Community Board Chairpersons Report for the Period 1 January 2025 to 30 September 2025** – Sarah Barkle (Oxford-Ohoka Community Board Chairperson)

RECOMMENDATION *282 – 288*

THAT the Council:

(a) **Receives** report No. 250904167536.

(b) **Circulates** a copy of this report to all the Community Boards.

8.7 **Kaiapoi-Tuahiwi Community Board Chairpersons Report for the Period 1 January 2025 to 30 September 2025** – Jackie Watson (Kaiapoi-Tuahiwi Community Board Chairperson)

RECOMMENDATION *289 – 293*

THAT the Council:

(a) **Receives** report No. 250922179735.

(b) **Circulates** a copy of this report to all the Community Boards.

8.8 **Rangiora-Ashley Community Board Chairpersons Report for the Period 1 January 2025 to 30 September 2025** – Jim Gerard (Rangiora-Ashley Community Board Chairperson)

RECOMMENDATION *294 – 300*

THAT the Council:

(a) **Receives** report No. 250922179987.

(b) **Circulate** a copy of this report to all the Community Boards.

8.9 **Woodend-Sefton Community Board Chairpersons Report for the Period 1 January 2025 to 30 September 2025** – Shona Powell (Woodend-Sefton Community Board Chairperson)

RECOMMENDATION *301 – 307*

THAT the Council:

(a) **Receives** report No. 250922179579.

(b) **Circulates** a copy of this report to all the Community Boards.

9. HEALTH, SAFETY AND WELLBEING

9.1 **Health, Safety and Wellbeing Report October 2025 to Current** - Jeff Millward (Chief Executive)

RECOMMENDATION *308 – 320*

THAT the Council:

(a) **Receives** Report No 251118219225

(b) **Notes** that there were no notifiable incidents this month. The organisation is, so far as is reasonably practicable, compliant with the duties of a person conducting a business or undertaking (PCBU) as required by the Health and Safety at work Act 2015.

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

10. COMMUNITY BOARD MINUTES FOR INFORMATION

10.1 Minutes of the Rangiora-Ashley Community Board meeting 29 October 2025

10.2 Minutes of the Woodend-Sefton Community Board meeting of 29 October 2025

10.3 Minutes of the Kaiapoi-Tuahiwi Community Board meeting 30 October 2025

RECOMMENDATION *321 – 332*

(a) **THAT** Items 10.1 to 10.3 be received for information.

11. COUNCIL PORTFOLIO UPDATES

11.1 **Iwi Relationships** – Mayor Dan Gordon

11.2 **Greater Christchurch Partnership Update** – Mayor Dan Gordon

11.3 **Government Reforms** – Mayor Dan Gordon

11.4 **Climate Change and Sustainability** – Councillor Niki Mealings

11.5 **International Relationships** – Deputy Mayor Philip Redmond

12. QUESTIONS

(under Standing Orders)

13. URGENT GENERAL BUSINESS

(under Standing Orders)

14. MATTERS TO BE CONSIDERED WITH THE PUBLIC EXCLUDED

Section 48, Local Government Official Information and Meetings Act 1987.

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:

That the public is excluded from the following parts of the proceedings of this meeting.

14.1 Mandeville Resurgence Project Update and Proposed Strategy Direction

14.2 East Woodend Stormwater Improvements

14.3 Business Case Approval for Solar Farm at Rangiora WWTP – Pre Construction Phase

15.1 Extension of Contracts 18/17 and 18/18: Kerbside Collection & Facilities Operations

15.2 Partial Acquisition of Todds Road and Fernside Road, Rangiora

15.3 Approval of Scheme Design and Commence Property Purchase Negotiations at Parsonage Road.

15.4 Request to Bring Forward Budget for the Kaiapoi Bridge Balustrade Upgrade

15.5 Contract 25/61 Parks and Reserves Maintenance Contract Tender Award

15.6 Scheduled Cleaning Services

15.7 Housing for the Elderly – Update on Projects and Planning

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:

Item No	Subject	Reason for excluding the public	Grounds for excluding the public.
WATER SERVICES RELATED REPORTS			
14.1	Mandeville Resurgence Project Update and Proposed Strategy Direction	Good reason to withhold exists under Section 7	To enable any local authority holding the information to carry out, without prejudice or disadvantage, commercial activities. **LGOIMA Section 7(h).**
14.2	East Woodend Stormwater Improvements	Good reason to withhold exists under Section 7	To enable any local authority holding the information to carry out, without prejudice or disadvantage, commercial activities, **LGOIMA Section 7(h) and 7(2)(i).**
14.4	Business Case Approval for Solar Farm at Rangiora WWTP – Pre Construction Phase	Good reason to withhold exists under Section 7	To enable any local authority holding the information to carry out, without prejudice or disadvantage, commercial activities, **LGOIMA Section 7(h).**
REPORTS			
15.1	Extension of Contracts 18/17 and 18/18: Kerbside Collection & Facilities Operations	Good reason to withhold exists under Section 7	To protect the privacy of natural persons and enabling the local authority to carry on without prejudice or disadvantage, negotiations (including commercial and industrial) negotiations and maintain legal professional privilege **LGOIMA Section 7 (2)(a), (g) and (i).**
15.2	Partial Acquisition of Todds Road and Fernside Road, Rangiora	Good reason to withhold exists under Section 7	protecting the privacy of natural persons and enabling the local authority to carry on without prejudice or disadvantage, negotiations (including commercial and industrial) negotiations and maintain legal professional privilege **LGOIMA Section 7 (2)(a), (g) and (i).**
15.3	Approval of Scheme Design and Commence Property Purchase Negotiations at Parsonage Road.	Good reason to withhold exists under Section 7	To protect the privacy of natural persons and enabling the local authority to carry on without prejudice or disadvantage, negotiations (including commercial and industrial) negotiation and maintain legal privilege. **LGOIMA Section 7 (2)(a), (g), and (i).**

15.4	Request to Bring Forward Budget for the Kaiapoi Bridge Balustrade Upgrade	Good reason to withhold exists under Section 7	protecting the privacy of natural persons and enabling the local authority to carry on without prejudice or disadvantage, negotiations (including commercial and industrial) negotiations and maintain legal professional privilege **LGOIMA Section 7 (2)(a), (g) and (i).**
15.5	Contract 25/61 Parks and Reserves Maintenance Contract Tender Award *(Refer to Supplementary Agenda)*	Good reason to withhold exists under Section 7	To enable any local authority holding the information to carry out, without prejudice or disadvantage, commercial activities, **LGOIMA Section 7(h).**
15.6	Scheduled Cleaning Services	Good reason to withhold exists under Section 7	To enable the local authority to carry on without prejudice or disadvantage, negotiations (including commercial and industrial) negotiation and maintain legal privilege **LGOIMA Section 7 (2) (g), and (i).**
15.7	Housing for the Elderly – Update on Projects and Planning	Good reason to withhold exists under Section 7	To enable the local authority to carry out, without prejudice or disadvantage, commercial activities and enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations) **LGOIMA Section 7(2)(h) and (i).**

CLOSED MEETING

Refer to Public Excluded Agenda (separate document).

OPEN MEETING

NEXT MEETING

The Council is scheduled to meet in the Council Chamber, Rangiora Service Centre, Rangiora at 9am on Tuesday 27 January 2026 to consider the Draft Annual Plan Budget for 2026/27.

The next ordinary meeting of the Council is scheduled for Tuesday 3 February 2026, commencing at 9am to be held in the Council Chamber, Rangiora Service Centre, 215 High Street, Rangiora.

MINUTES A MEETING OF THE WAIMAKARIRI DISTRICT COUNCIL HELD IN THE COUNCIL CHAMBER, 215 HIGH STREET, RANGIORA, ON TUESDAY 4 NOVEMBER 2025, COMMENCING AT 9AM.

PRESENT

Mayor D Gordon (Chairperson), Deputy Mayor P Redmond, Councillors T Bartle, B Cairns, W Doody, T Fulton, J Goldsworthy, B McLaren, N Mealings, S Powell, and J Ward.

IN ATTENDANCE

J Millward (Chief Executive), C Genet (General Manager Finance and Business Support), K Simpson (3 Waters Manager), J McBride (Roading and Transport Manager), C Roxburgh (Project Delivery Manager), K Straw (Civil Projects Team Leader), C Fowler-Jenkins (Governance Support Officer).

1. APOLOGIES

Nil.

2. CONFLICTS OF INTEREST

Nil.

3. ACKNOWLEDGEMENTS

Councillor Fulton acknowledged the passing of Warrick Croft, noting his contributions as a valued member of the Oxford Lions Club and his involvement across various sporting and recreational activities.

The Council observed a moment of silence in his memory.

4. CONFIRMATION OF MINUTES

4.1 Minutes of a meeting of the Waimakariri District Council held on Wednesday 29 October 2025

Moved: Councillor Bartle Seconded: Councillor Goldsworthy

THAT the Council:

(a) **Confirms,** as a true and correct record, the circulated Minutes of the Waimakariri District Council meeting held on Wednesday 29 October 2025

CARRIED

5. DEPUTATIONS AND PRESENTATIONS

Nil.

6. ADJOURNED BUSINESS

Nil.

7. REPORTS

7.1 **Governance Arrangements for Waimakariri Water Services Unit** – G Cleary (General Manager Utilities and Roading), K Simpson (3 Waters Manager) and H Davies (Special Projects Team Leader)

K Simpson presented the report, noting its purpose was to seek Council approval for the proposed governance structure for the Council's Water Services functions. This recommendation had been presented to the previous Council and formally endorsed for consideration by the incoming Council. Staff advised that the Water Services Delivery Plan, approved by the Department of Internal Affairs (DIA) in July 2025, included a requirement to establish a dedicated governance structure for water services. This was primarily in response to significant compliance reporting obligations and the need for operational separation of water services functions. The recommended approach was to create a dedicated section within regular Council meetings specifically for water services. The report also proposed adopting a similar arrangement within the Utilities and Roading Committee agenda, with a dedicated water services section, while the Committee would continue to operate under its current delegations.

Councillor Fulton asked for an example of what constituted high-level water services matters versus day-to-day operations. K Simpson explained that a report seeking approval for a combined roading, and water services budget would be included in the ordinary Council agenda, whereas water-specific matters required by legislation would be addressed in the water services section.

Deputy Mayor Redmond queried the proposed service arrangements for adjoining Councils. K Simpson clarified that existing arrangements, such as the Project Delivery Unit providing engineering modelling services to Hurunui District Council would continue, even though the Hurunui and Kaikōura District Councils were establishing Council-controlled Organisations (CCO). Funding for these services would be managed between Kaikōura District Council, the Water Services CCO, and the Project Delivery Unit.

Responding to a further question from Deputy Mayor Redmond, K Simpson confirmed that water regulator fees would be based on population.

Councillor Cairns asked whether the proposed processes would meet legislative requirements regarding Māori land. K Simpson noted that it would, as staff were developing protocols to comply with new requirements, which differ from previous rights under the Local Government Act, 2002.

Councillor Doody enquired about how the Water Services Business Unit would deal with Council reserves. K Simpson explained that the Water Services Business Unit covered water supply, wastewater, urban stormwater, rural land drainage, and stockwater. Urban stormwater infrastructure often related to Greenspace reserves, so staff would work closely with the Greenspace Team.

Moved: Councillor Fulton Seconded: Deputy Mayor Redmond

THAT the Council:

(a) **Receives** Report No. 251017197594.

(b) **Approves** the establishment of a dedicated Water Services section (Part B) within the:

- Council agenda to provide strategic governance and oversight of the new Waimakariri Water Services Unit (WWSU).
- Utilities and Roading Committee agenda to ensure clear functional separation and enhanced visibility.

(c) **Notes** that these arrangements will ensure the Council meets its regulatory obligations by providing both strategic oversight and operational separation of water services, as required under the LWDW programme.

(d) **Note** that Report No. 250723135093 was previously approved by the outgoing Council on 30 September 2025, which recommended that the incoming Council endorse the proposed governance structure following the elections.

(e) **Notes** that a separate Report No. 250909171402 was also previously approved by the outgoing Council on 30 September, which outlines a list of governance matters, with recommendations to be made to the incoming Council. This includes arrangements for ensuring separation on Water Services matters.

(f) **Notes** that Water Services matters will be considered within a sectionalised portion of the full Council agenda (Part B), with full Council delegations applying to these matters. It is proposed that Part B may also consider matters outside of Water Services when presented within a combined report that includes both Water Services and non-Water Services content, to avoid duplication.

(g) **Notes** that the Water Services section (Part B) will be implemented from the start of the new Council term. While the transition to a new Water Services governance arrangement is not required until July 2027, early adoption demonstrates Council's commitment and allows time to identify and resolve any minor operational issues.

(h) **Notes** that the Utilities and Roading and Audit and Risk Committees will continue to hold their standard delegations.

(i) **Notes** that the Council's in-house water services delivery model is backed by strong community support and delivers excellent value through lower overheads and low-cost loans, when compared to other models such as a CCO. With the third lowest average water rate in New Zealand, the model enables affordable infrastructure investment for ratepayers. Council was the second entity overall to be approved by the Department of Internal Affairs, and the first to be approved as an in-house water services business unit, enabling internal synergies with both explicit and implicit benefits to the community.

CARRIED

Councillor Fulton supported the motion, noting it was the result of significant work by the Mayor, staff, and Councillors during the previous triennium. He highlighted the extensive engagement undertaken and stated that the structure reflected community consensus to retain local control and oversight of water services. He considered the proposed approach efficient and the right model for the Waimakariri District.

Deputy Mayor Redmond noted that Council's internal Water Services Business Unit had been consulted on and supported by residents and Councillors at the time. He emphasised the Council's collaborative approach and its intention to continue to support the Hurunui and Kaikōura District Councils with their water services. He further highlighted that the Waimakariri was the first Council to have an internal business unit approved, which would deliver benefits through lower overheads and reduced borrowing requirements.

Mayor Gordon supported the motion and acknowledged staff for their advice and commitment to achieving the best outcome for the community. He noted that the Council could be proud of being the first to secure approval for an in-house model. The governance arrangements proposed would ensure compliance and maintain effective oversight, reflecting the importance of water services to the community.

7.2 **Approval of Subdivision Contribution Programme for 2025/26** – J McBride (Roading and Transport Manager) and K Straw (Civil Projects Team Leader)

J McBride presented the report, noting that it sought approval for the Roading Subdivision Contribution Programme for the current year and highlighted an anticipated budget overspend in this area. The report also sought approval for the Scheme Design for River Road Stage Two.

Councillor Fulton questioned the future use of the Kippenberger Avenue stock underpass. J McBride advised that a previous report had recommended decommissioning the underpass following an extensive feasibility review, which concluded that retaining it as a pedestrian underpass was not viable. Hence, the Council subsequently approved its decommissioning.

Mayor Gordon raised a concern that the gritted paths on River Road, Rangiora did not appear to receive the same maintenance as other paths. J. McBride acknowledged this and confirmed that it was included in the maintenance contract, and staff would, therefore, follow up with the contractor.

Deputy Mayor Redmond enquired about the status of private seal extensions. J McBride advised that funding private seal extensions was discretionary to the Council and not a statutory requirement. While there was an allowance for some sealing within the funding area, there was currently a lengthy waiting list.

Moved: Councillor Ward Seconded: Councillor McLaren

THAT the Council:

(a) **Receives** Report No. 250623113115.

(b) **Approves** staff progressing with the following development related Council led projects, subject to normal procurement approvals:

i. Stopforth / Parsonage Intersection Realignment.
ii. Removal of South Belt Street Lighting.

(c) **Approves** the scheme design of River Road Urbanisation, as per attachment i of this report.

(d) **Notes** that Council has previously approved the following works being undertaken:

i. Decommissioning of Kippenberger Ave Underpass.
ii. Removal of Silverstream Speed Tables on Silverstream Boulevard.

(e) **Notes** that it is anticipated the following Developments will proceed and require a Council contribution towards upgrading:

i. River Road Urbanisation (Enverton Dr to Cones Rd).
ii. Pentecost Road Upgrade (South of School).

(f) **Notes** that the current budget of $879,077 is unlikely to be sufficient to meet Council's share of costs associated with development and urbanisation costs, and as such this budget is likely to be overspent if all projects were to proceed, with an overspend of $242,188 currently predicted.

(g) **Notes** the updated commitments are summarised in Table One of this report.

(h) **Notes** that funding for growth areas is budgeted to allow "unders and overs" and as such it is proposed to accept the over expenditure in the short term.

(i) **Notes** that staff will review the Subdivision Contribution budgets as part of the next Long Term Plan and recommend a budget that better matches the average subdivision requirement in recent years.

(j) **Notes** that over the last 7 years the budget has typically been sufficient to fund the works, with the 2024/25 year being overspent by $617,000.

(k) **Notes** the River Road Stage 2 design has been based on the wider design implemented following feedback on Stage One and is wider than the current carriageway.

(l) **Notes** that an allowance has been made to fund urbanisation on River Road between Enverton Drive and previously completed Stage One (outside no. 69). The sections outside of the development frontage will be fully funded through the Subdivision Contribution area.

(m) **Circulates** this report to the Community Boards for information.

CARRIED

Councillor Ward expressed support for the approach taken, noting that completing the road work to a high standard was a sensible and cost-effective decision. She commended staff for their actions and gave her full approval of the work being undertaken.

Councillor Mealings acknowledged the challenges in aligning funding with developer timelines, as it is often unclear when development works would be completed. She praised staff for their efforts, describing the decision as practical and expressing her support for the initiative.

7.3 **Request to Bring Forward Budget for Fernside Road / Todds Road Intersection Improvement Project** – J McBride (Roading and Transport Manager) and K Straw (Civil Projects Team Leader)

J McBride presented the report, noting that it sought approval to bring forward $66,000 from the 2026/27 financial year budget to enable preliminary works to proceed ahead of the planned Fernside/Todds Roads intersection upgrade. Staff were continuing property negotiations with owners along Fernside Road to facilitate the installation of a right turn bay at the intersection.

Councillor Fulton inquired whether the project formed part of a broader strategic plan. J McBride confirmed that it did, referencing a comprehensive study undertaken four years ago on the West Rangiora transport corridor. That work identified a series of long-term projects, including upgrades along Oxford Road, Lehmans Road, Fernside Road, Flaxton Road, and Skewbridge.

Deputy Mayor Redmond asked how the proposed Townsend /Fernside Roads intersection improvements aligned with the overall strategy and whether they were prioritised ahead of the Todds Road improvements. J McBride explained that Todds Road had been given higher priority due to the absence of a right turn bay, which currently caused vehicles to queue while turning. In contrast, Townsend Road had received safety improvements approximately 10 to 15 years ago which already included a right turn bay.

Moved: Deputy Mayor Redmond Seconded Councillor McLaren

THAT the Council:

(a) **Receives** Report No. 251020198856.

(b) **Approves** bringing forward budget of $66,000 in PJ 102135.000.5135 (Fernside Road / Todds Road budget) from the 2026/27 financial year, into the 2025/26 financial year to provide a total budget of $226,000 (PJ 102135.000.5135).

(c)

(d) **Notes** that the budget is funded from the District Wide Roading account.

(e) **Notes** that the remainder of the enabling works will be funded from the West Rangiora Route Improvements budget which has funding available in the 2025/26 financial year of $85,000 (PJ 101101.000.5135), and therefore the total budget across these two budget areas for completion of the enabling works this financial year is $311,000.

(f) **Notes** that it is anticipated that there will be sufficient budget of $434,000 in 2026/27 to complete the construction works which are estimated at $426,000.

(g) **Notes** that across both the two financial years (2025/26 and 2026/27), this project has a combined total budget of $745,000, and an expected total cost of $737,000.

(h) **Notes** that land purchase costs will be funded separately from the Land Purchases – Growth budget (PJ101556.000.5135).

CARRIED

Deputy Mayor Redmond acknowledged that project sequencing was a matter of prioritisation and accepted the rationale provided by staff. He noted that while Todds Road was being prioritised, further work would eventually be required on Townsend Road. Deputy Mayor Redmond supported the motion.

Councillor McLaren expressed appreciation to staff and indicated his support for the planned Fernside/Todds Roads intersection upgrade.

Mayor Gordon also endorsed the motion, describing it as a progressive step toward enhancing infrastructure in the district. He noted the increasing development in the vicinity of the intersection had emphasised the importance of completing the work.

Councillor Mealings concurred with Mayor Gordon, recognising that the significant new development occurring in the area bolstered the need for the proposed Fernside/Todds Roads intersection upgrade.

Councillor Fulton observed that considerable painting and upgrade work had been undertaken on narrow rural roads, particularly around culverts. He highlighted the importance of those improvements, commended the work, and voiced his support for the motion.

7.4 **Procurement and Contract Management Policy Review 2025** – C Roxburgh (Project Delivery Manager) and R Bailey (Procurement Specialist)

C Roxburgh presented the report, explaining that its purpose was to seek approval for the updated Procurement and Contract Management Policy (the Policy). He noted that the Policy was last reviewed in 2022 and was due for its next review in 2025. An overview of the proposed changes was provided.

Councillor Mealings asked whether the Policy reflected the recent changes introduced by Central Government. C Roxburgh clarified that Government's procurement rules applied to Central Government agencies spending Crown funds. Local Government bodies were able to develop their own procurement policies. Therefore, while the Government's procurement rules served as useful guidance, they were not mandatory for Local Government.

Councillor Bartle queried how the success of the Policy changes would be measured. C Roxburgh responded that due to the employment of a Procurement Specialist, staff were now able to produce more detailed procurement reporting. A dashboard was being developed to provide greater visibility of Council expenditure and improve oversight.

Councillor McLaren questioned how contractor selection was managed in cases where the requirement for three quotes did not apply. C Roxburgh explained that the three-quote rule was a minimum standard. For example, if the Council intended to make a $20,000 purchase and did not have preferred suppliers, it would be appropriate to seek multiple quotes.

Councillor McLaren also enquired why the Council had not raised the procurement threshold to $50,000, in line with some North Island councils. C Roxburgh advised that it was a matter of balance. A higher threshold would allow staff to make more decisions independently, without needing approval from senior management, which could improve efficiency.

Moved: Councillor Goldsworthy Seconded: Councillor Bartle

THAT the Council:

(a) **Receives** Report No. 241017180389.

(b) **Approves** the updated Procurement and Contract Management Policy to be effective from 1 December 2025, noting that the lead in time between adoption of this report and the new Policy becoming effective is to allow time for supporting documentation and systems to be updated to align with the updated Policy.

(c) **Notes** that the current update is considered a relatively minor update, and over the coming three years, it is proposed to undertake a more comprehensive review of the Council's overall procurement framework, starting with the Procurement Strategy in 2026, followed by a further potentially more comprehensive Procurement Policy review in 2027, followed by updates to process and guidance documentation to reflect the updated Strategy and Policy in 2028.

CARRIED

Councillor Goldsworthy expressed support for the direction of the Policy update. He viewed the upcoming work during the current term as a valuable opportunity to refresh the Council's existing framework, with the expectation that the full content would be in place by the end of the term.

Councillor Bartle agreed, noting that the next three years would be an engaging period for the Council. He therefore supported the motion

Councillor Mealings described the proposed changes as sensible, characterising them as minor adjustments to the existing policy.

Deputy Mayor Redmond observed that the review involved modest refinements, including adjustments to thresholds, some of which had not been inflation-adjusted, with at least one reduced and others increased accordingly. He noted that the Council's sole source procurement thresholds were conservative and expressed interest in future discussions around risk management.

7.5 **Elected Member Remuneration** – S Nichols (Governance Manager)

J Millward took the report as read, and there were no questions from elected members.

Moved: Mayor Gordon Seconded: Councillor Doody

THAT the Council:

(a) **Receives** Report No. 251031207023.

(b) **Notes** the Mayoral remuneration is set by the Remuneration Authority at $164,728pa from 17 October 2025 to 30 June 2026.

(c) **Approves** the Deputy Mayor (Philip Redmond), receiving remuneration of $91,271pa from 17 October 2025 to 30 June 2026.

(d) **Approves** all nine Councillors receiving remuneration with their portfolio responsibilities of $71,026pa from 17 October 2025 to 30 June 2026.

CARRIED

6.1 **Appointments to Working Groups** – Mayor D Gordon

Mayor Gordon took the report as read, and there were no questions from elected members.

Moved: Councillor McLaren Seconded: Councillor Doody

THAT the Council

(a) **Receives** Report No. 251031207125.

(b) **Notes** Mayor Gordon is ex-officio to all Committee and sub-committees of the Council.

(c) **Notes** all appointments cease at the end of the 2025-2028 Local Body Triennial term, being 14 October 2028, unless appointed to a Council Controlled Organisation (CCO) or altered explicitly by the Council.

(d) **Appoints** Councillor Mealings to the Canterbury Waste Joint Committee.

(e) **Appoints** Councillor Mealings to the Canterbury Regional Landfill Joint Committee.

(f) **Appoints** Councillor Mealings to the Recovered Materials Foundation – TerraNova (Trustee).

(g) **Appoints** Mayor Gordon to the Canterbury Regional Council – Regional Land Transport Committee.

(h) **Appoints** Mayor Gordon to the Canterbury Regional Council – Passenger Transport Advisory Group.

(i) **Appoints** Councillor Mealings to the Climate Change Action Planning Reference Group.

(j) **Appoints** Councillor Mealings to the Biodiversity Champions Group.

(k) **Appoints** Councillor Mealings to the Christchurch City Council Coastal Hazards Working Group, as an observer.

(l) **Appoints** Mayor Gordon and Councillors Goldsworthy and Mealings as the Council representatives on the Waimakariri Youth Council.

(m) **Appoints** Mayor Gordon and Councillor Redmond as Council's representative on the Waimakariri Passchendaele Advisory Group.

(n) **Appoints** Councillors Cairns and Redmond to the Road Safety Working Group.

(o) **Appoints** Mayor Gordon and Councillors Redmond and Ward as the Council's representative on the Southbrook Road Improvements Working Group.

(p) **Appoints** Mayor Gordon and Councillors Ward and Redmond as the Council's representative on the Southbrook Road Reference Group.

(q) **Appoints** Councillors Redmond (Chair), Cairns, Doody, McLaren and Mealings to the Property Asset Working Group.

(r) **Appoints** Mayor Gordon as the Council's representative on the Waitaha Primary Health Ltd, Waitaha Primary Health Aoraki Ltd and Waitaha Primary Health Holdings Ltd.

(s) **Appoints** Mayor Gordon and Councillor Powell to the North Canterbury Health Hub Project Steering Group.

(t) **Appoints** Councillor Doody to the Social Services Waimakariri.

(u) **Appoints** Councillor Bartle to the Waimakariri Health Advisory Group.

(v) **Appoints** Councillor Goldsworthy to the Waimakariri Age-Friendly Advisory Group.

(w) **Appoints** Councillor Powell as the Council's representative on the Waimakariri Access Group.

(x) **Appoints** Councillor Powell as the Council's representative on the Community Wellbeing North Canterbury Trust.

(y) **Appoints** Councillor Powell to the Creative Communities NZ Assessment Committee.

(z) **Appoints** Councillor Cairns as the Council's representative on the Waimakariri Community Arts Council, Waimakariri Art Collection Trust, Waimakariri Public Arts Trust.

(aa) **Appoints** Councillor McLaren as the Council's representative on the North Canterbury Museums' Group.

(bb) **Appoints** Councillor Goldsworthy as the Council's representative on the Rangiora Promotions Management Board. noting the Rangiora-Ashley Community Board will also appoint a member to the Rangiora Promotions Management Board**.**

(cc) **Appoints** Councillor Fulton as the Council's representative on the Experience Oxford Group, noting the Oxford-Ohoka Community Board will also appoint a member to the Experience Oxford Group**.**

(dd) **Appoints** Councillor Cairns as the Council's representative on the Kaiapoi Promotions Association, noting the Kaiapoi-Tuahiwi Community Board will also appoint a member to the Kaiapoi Promotions Association.

(ee) **Appoints** Councillors Cairns, Fulton, Goldsworthy, McLaren Powell and Ward to the Promotions Association Review Working Group.

(ff) **Appoints** Councillor Redmond as the Council's representative on the Rangiora Airfield Advisory Group.

(gg) **Appoints** Councillors Bartle and Powell as the Council's representatives on the Kaiapoi Marine Precinct Bookings Advisory Group.

(hh) **Appoints** Councillor Redmond and Ward as the Council's representative on the North Canterbury Sport and Recreation Trust.

(ii) **Appoints** Councillor Fulton as the Council's representative on the Southbrook Sports Club, noting the Rangiora-Ashley Community Board will also appoint a member to the Southbrook Sports Club.

(jj) **Appoints** Councillor Mealings to the Mandeville Sports Club Committee.

(kk) **Appoints** Oxford-Ohoka Community Board Member W Godfrey to the Canterbury Regional Councils – Biosecurity Advisory Group (Northern).

(ll) **Appoints** Councillor Powell as Chair to the Northern Pegasus Bay Advisory Group.

(mm) **Appoints** Councillors Goldsworthy (Chair), Doody, Fulton, McLaren Powell and Redmond to the Facilities and Consents Fee Waiver Subcommittee.

(nn) **Appoints** Mayor Gordon and Councillor Ward to the Project Control Group for the Annual and Long Term Plans.

(oo) **Appoints** Councillors Bartle and Goldsworthy to the Waimakariri Walking and Cycling Reference Group.

(pp) **Appoints** Councillor Fulton to the Canterbury Regional Council – Waimakariri/ Eyre/Cust River Rating Committee.

(qq) **Appoints** Councillor Fulton to the Canterbury Regional Council – Ashley River Rating Committee.

(rr) **Appoints** Council Fulton to the Hurunui District Council – Ashley Rural Water Scheme Management Committee.

(ss) **Appoints** Councillor Bartle as the Council's representative on the Clarkville Rural Drainage Advisory Group, noting Kaiapoi-Tuahiwi Community Board will also appoint a member to the Clarkville Rural Drainage Advisory Group.

(tt) **Appoints** Councillor Bartle as the Council's representative on the Coastal Rural Drainage Advisory Group, noting Kaiapoi-Tuahiwi and Woodend-Sefton Community Boards to also appoint members to the Coastal Rural Drainage Advisory Group.

(uu) **Appoints** Councillor Goldsworthy as the Council's representative on the Central Rural Drainage Advisory Group, noting Kaiapoi-Tuahiwi and Rangiora-Ashley Community Boards will also appoint members to the Central Rural Drainage Advisory Group.

(vv) **Appoints** Councillor Mealings as the Council's representative on the Ohoka Rural Drainage Advisory Group, noting Oxford-Ohoka Community Board will also appoint a member to the Ohoka Rural Drainage Advisory Group.

(ww) **Appoints** Councillor Fulton as the Council's representative on the Oxford Rural Drainage Advisory Group, noting Oxford-Ohoka Community Board will also appoint a member to the Oxford Rural Drainage Advisory Group.

(xx) **Appoints** Councillor Fulton as the Council's representative on the Waimakariri Water Race Advisory Group.

(yy) **Authorises** the Woodend-Sefton Community Board to appoint a member as the Council's representative on the Canterbury Regional Council – Sefton/Ashley and Sefton River Rating District Committees.

(zz) **Notes** that the appointment of a member as the Council's representative on the Hurunui District Council – Ashley Rural Water Scheme Management Committee will be made at a later date by the Woodend-Sefton and Rangiora-Ashley Community Boards.

(aaa) **Appoints** David Ayers to the Canterbury Museum Trust Board, representing both Hurunui and Waimakariri District Councils.

(bbb) **Appoints** Councillor Ward as the Council representative to the Canterbury Museum Trust Board Standing Committee.

(ccc) **Appoints** Councillors Mealings (Chair), Bartle, Doody, Goldsworthy and Redmond to the Solid and Hazardous Waste Working Party.

(ddd) **Appoints** Mayor Gordon and Councillors Cairns, McLaren and Mealings to the Arohatia Te Awa Working Group.

(eee) **Appoints** Councillor Mealings to the Natural Environment Strategy Project Control Group.

(fff) **Appoints** Councillor Redmond to the Enshi Sister City Advisory Group.

(ggg) **Approves** Mayor Gordon voting on behalf of the Council for the Rural/Provincial sector representative position on the National Council of Local Government NZ and the Chair of Zone 5 Local Government NZ.

(hhh) **Authorises** the Oxford-Ohoka Community Board to appoint representatives or liaison people to the following groups:

Ashley Gorge Reserve Advisory Group, Ohoka Domain Advisory Group, Pearson Park Advisory Group (two members), Experience Oxford Committee, Oxford Historical Records Society Inc Committee, Ohoka Residents Association, Mandeville Sports Centre, North Canterbury Neighbourhood Support, GreyPower North Canterbury, Waimakariri Access Group, Waimakariri Health Advisory Group, Ohoka Rural Drainage Advisory Group, Oxford Rural Drainage Advisory Group, Water Races Advisory Group and Ashley River Water Supply Scheme.

(iii) **Authorises:** The Kaiapoi-Tuahiwi Community Board to appoint representatives or liaison people to the following groups:

The Pines-Kairaki Beaches Association, Kaiapoi Landmarks Team, Kaiapoi Districts and Historical Society, Kaiapoi Promotions Association, Kaiapoi Signage Working Group, Waimakariri Arts Trust, Heritage and Mahinga Kai Joint Working Group, Darnley Club, Silverstream Advisory Group, Northern Bulldogs Rugby League Club, North Canterbury Neighbourhood Support, GreyPower North Canterbury, Waimakariri Health Advisory Group, Waimakariri Access Group, Northern Pegasus Bay Advisory Group, Marine Precinct Bookings Advisory Group, Clarkville Rural Drainage Advisory Group, Coastal Rural Drainage Advisory Group, Central Rural Drainage Advisory Group, Group.

(jjj) **Authorises:** The Rangiora-Ashley Community Board to appoint representatives or liaison people to the following groups:

Rangiora and Districts Early Records Society, Cust and District Historical Records Society Inc, Rangiora Promotions Association, Friends of Rangiora Town Hall, Fernside Hall Advisory Group, Cust Community Centre Advisory Group, Loburn Domain Advisory Group, Cust Domain Advisory Group, Southbrook Sports Club, Southbrook Road Improvements Working Group, Southbrook Reference Group, Southbrook School Travel Plan Working Group, Keep Rangiora Beautiful, North Canterbury Neighbourhood Support, GreyPower North Canterbury, Waimakariri Health Advisory Group, Waimakariri Access Group, Central Rural Drainage Advisory Group, Water Races Advisory Group and notes an appointment to the Hurunui District Council – Ashley Rural Water Scheme Management Committee will occur at a later date.

(kkk) **Authorises** the Woodend-Sefton Community Board to appoint representatives or liaison people to the following groups:

Woodend Community Centre Advisory Group, Sefton Public Hall Society, Gladstone Park Advisory Group, Sefton Domain Advisory Group, Pegasus Residents Group, Waikuku Beach Residents Group, Woodend Community Association, North Canterbury Neighbourhood Support, GreyPower North Canterbury, Waimakariri Health Advisory Group, Waimakariri Access Group, Northern Pegasus Bay Advisory Group, Canterbury Regional Council – Sefton/Ashley and Sefton River Rating District Committees, Sefton Township River and Drainage Ratepayer District, and the Coastal Rural Drainage Advisory Group and notes an appointment to the Hurunui District Council – Ashley Rural Water Scheme Management Committee will occur at a later date.

CARRIED

8. HEALTH, SAFETY AND WELLBEING

8.1 **Health, Safety and Wellbeing Report September 2025 to Current** - J Millward (Chief Executive)

J Millward took the report as read, and there were no questions from elected members.

Moved: Councillor Fulton Seconded: Councillor Goldsworthy

THAT the Council:

(a) **Receives** Report No 251022201638.

(b) **Notes** that there were no notifiable incidents this month. The organisation is, so far as is reasonably practicable, compliant with the duties of a person conducting a business or undertaking (PCBU) as required by the Health and Safety at Work Act 2015.

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

CARRIED

The Council meeting adjourned from 10:26am to 10:45am

9. MATTERS REFERRED FROM COMMUNITY BOARDS

9.1 **School Variable Speed Limits Proposal** – J McBride (Roading and Transport Manager) and P Daly (Road Safety Coordinator/Journey Planner)

J McBride presented the report, noting that staff was still awaiting a formal response from the New Zealand Transport Agency (NZTA) regarding co-funding. She noted that the Rangiora-Ashley Community Board requested that North Loburn School have an electronic sign rather than a static sign.

Councillor Fulton queried the status of West Eyreton School, noting it was not recommended for 30km/h and was currently 40km/h. J McBride confirmed the current limit was 40km/h and explained that, following feedback from the four Community Boards, there was a desire for consistency where practical. Hence, staff applied a standard of 30km/h with a few exceptions.

Councillor Bartle asked if co-funding was approved, what was the timeframe for implementation. J McBride advised that signage rollout was planned for the six months following Christmas, aiming for completion by 30 June 2026 to meet the requirements of the Land Transport Rule: Setting of Speed Limits 2024 . If funding was not approved, staff would report back to the Council before Christmas, though this was not anticipated.

Deputy Mayor Redmond queried weather the Council had jurisdiction on State Highway One under the legislation to impose a speed limit reduction near Woodend School. J McBride clarified that the Council did not, as this was a NZTA responsibility; however, staff were working with the NZTA on a speed reduction to 30km/h.

Deputy Mayor Redmond also asked whether wider public consultation was considered. J McBride noted that it was not, as there were no requirement and the timeframe for implementing the speed limits under the Land Transport Rule was tight.

Responding to a further question from Deputy Mayor Redmond, J McBride confirmed that the Council was generally in alignment with the Hurunui District Council and Christchurch City Council regarding the implementation of the Land Transport Rule .

Moved: Mayor Gordon Seconded: Councillor Cairns

THAT the Council

(a) **Approves** the following Variable Speed Limits for the schools in the Oxford-Ohoka Community Board area:

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Ohoka School Jacksons Road *From 40m south of Mill Road to 115m north of Birchdale Place* *(RP 2.171 to RP 2.775)*	2	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Static signs
Oxford Area School Bay Road *From 100m south of Bush Road to 20m north of Dohrmans Road.* *(RP 0.720 to RP 0.200)* And; Showgate Drive *The full length from Bay Road to the end.*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Static signs
Swannanoa School Tram Road *From 150m west of the school access (driveway) to 300m east of the access.* *(RP 13.432 to RP 12.994)*	2	60km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Existing electronic signs

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
View Hill School Bay Road *For a distance of 270m to the west and 270m to the east of the school gate.* *(RP 4.789 to RP 5.173)*	2	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs
West Eyreton School North Eyre Road *For 120m west of School Road to 350m east of School Road*. *(RP 16.682 to 16.200)*	2	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Static signs

And <u>School Road</u> *From 85m north of North Eyre Road to 230m south of North Eyre Road.* *(RP 1.672 to RP 1.349)*				

(b) **Notes** that the National Speed Limit Register (NSLR) will only be updated to include the variable speed limits following approval by Council to implement the changes.

(c) **Notes** that the Land Transport Rule: Setting of Speed Limits 2024 does not require a cost benefit calculation or public consultation when setting variable speed limits outside schools.

(d) **Notes** that key stakeholders including the Police and NZ Transport Agency will be notified prior to the variable speed limits being implemented.

Notes that at the time of writing this report, co-funding for the installation of the variable speed signs has been requested but not yet approved. Staff will provide an update to the In-coming Council when the report is presented.

(e) **Notes** that implementation was subject to New Zealand Transport Agency co-funding approval which was currently under consideration.

CARRIED

Mayor Gordon commented that a consistent approach was essential for speed limits to be effective. He stressed the importance of safety around schools, noting he did not want it on his conscience that the Council could have acted to prevent an incident. Schools had highlighted the significance of road safety, and he hoped the Council would be able to secure NZTA funding, because without funding, implementation would be challenging. He acknowledged P Daly and J McBride for their work and ensuring alignment across Community Boards.

Councillor Cairns endorsed the Mayor's comments and thanked P Daly for liaising with all the Community Boards and schools. He looked forward to co-funding from the NZTA, stating that making children safe when travelling to and from school was intuitively obvious.

Councillor Mealings noted that the Council had undertaken a comprehensive process and the and engagement with schools clarified their needs. She agreed that greater uniformity would remove uncertainty, thereby making speed limits more effective.

Councillor Futon acknowledged the value in uniformity in lower speeds around schools, he acknowledged staff for their work with the Community Boards and the Council.

Deputy Mayor Redmond observed that speed limit decisions required balancing safety and efficiency, but in this case, safety was paramount. He indicated he would have supported a shorter implementation timeframe.

9.2 **School Variable Speed Limits Proposal** – J McBride (Roading and Transport Manager) and P Daly (Road Safety Coordinator/Journey Planner)

Refer to Item 9.1 for discussion.

Moved: Mayor Gordon Seconded: Councillor Cairns

THAT the Council

(a) **Approves** the following Variable Speed Limits for the schools in the Woodend-Sefton Community Board area:

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Pegasus Bay School Solander Road/ Murfitt Street *20 metres south of Awarua Road to 20 metres north of Tahuna Street (Solander Road RP 0.350 to Murfitt Street RP 0.196)* Whakatipu Street *25 metres west of Te Pakiaka Road to 20 metres north of Pegasus Boulevard (RP 0.020 to RP 0.430)* Pegasus Boulevard *70 metres west of Solander Road to 60 metres east of Solander Road (RP 1.789 to RP 1.923)* Mary Ellen Street *Solander Road to 20 metres east of Solander Road (RP 0.000 to RP 0.020)* Hikurangi Street *Whakatipu Street to 20 metres west of Whakatipu Street (RP 0.000 to RP 0.020)* Awarua Road *Whakatipu Street to 20 metres north of Whakatipu Street (RP 0.000 to RP 0.020)*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Whakatipu Street. Static signs on remaining sites
Sefton School Upper Sefton Road *10 metres west of Buller Street to 335 metres east of Buller Street (RP 7.037 to RP 6.680)* Cross Street *20 metres east of Buller Street to 320 metres east of Buller Street*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Upper Sefton Road Static signs on remaining sites.

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
(RP 0.130 to RP 0.444) Buller Street *Upper Sefton Road to 20 metres north of Upper Sefton Road* *(RP 0.000 to RP 0.020)*				
Woodend School Main North Road *Main North Road extent of existing VSL north and south (managed by NZTA).* Rangiora Woodend Road *140 metres north of School Road to 445 metres south of School Road* *(RP 0.740 to RP 0.156)* School Road *Main North Road to Rangiora-Woodend Road.* *(RP 0.000 to RP 0.299)* Gibbs Drive *From School Road to 73 metres north of School Road* *(RP 0.000 to RP 0.073)* Gladstone Road *Main North Road to 39 metres east of Main North Road* *(RP 0.000 to RP 0.039)* Petries Road *Main North Road to 39 metres east of Main North Road* *(RP 0.000 to RP 0.039)*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Main North Road, provided and managed by NZTA. Static signs on remaining sites.

(b) **Notes** that the National Speed Limit Register (NSLR) will only be updated to include the variable speed limits following approval by Council to implement the changes.

(c) **Notes** that the Land Transport Rule: Setting of Speed Limits 2024 does not require a cost benefit calculation or public consultation when setting variable speed limits outside schools.

(d) **Notes** that key stakeholders including the Police and NZ Transport Agency will be notified prior to the variable speed limits being implemented.

(e) **Notes** that at the time of writing this report, co-funding for the installation of the variable speed signs has been requested but not yet approved. Staff will provide an update to the In-coming Council when the report is presented.

(f) **Notes** that implementation was subject to New Zealand Transport Agency co-funding approval which was currently under consideration.

CARRIED

9.3 **School Variable Speed Limits Proposal** – J McBride (Roading and Transport Manager) and P Daly (Road Safety Coordinator/Journey Planner)

Refer to Item 9.1 for discussion.

Moved: Mayor Gordon Seconded: Councillor Cairns

THAT the Council

(a) **Receives** Report No. 250826157522.

(b) **Approves** the following Variable Speed Limits for the schools in the Rangiora-Ashley Community Board area:

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Tutira Ashgrove School Kingsbury Avenue *70 metres east of Regent Avenue to 20 metres west of White Street (RP 1.230 to RP 0.907)* Regent Avenue *Kingsbury Avenue to 20 metres north of Kingsbury Avenue. (RP 0.001 to RP 0.021)* Windsor Court *Kingsbury Avenue to 20 metres north of Kingsbury Avenue. (RP 0.001 to RP 0.021)* Kinley Street *From north end of Kinley Street to 40 metres south of Seddon Street (RP 0.580 to RP 0.250)* Seddon Street *20 metres east of Ashgrove Street to 43 metres east of Kinley Street (RP 0.800 to RP 0.463)* McKenzie Place/Keldon Avenue *On Keldon Avenue 82 metres south of Seddon Street to the north end of McKenzie Place* *(McKenzie Place RP 0.105 to Keldon Avenue RP 0.260)*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Static signs at all sites.
Ashley Rakahuri School Fawcetts Road/ Upper Sefton Road				

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Existing VSL. Fawcetts Road 165 metres west of Boundary Road to Upper Sefton Road 70 metres east of High Street (Fawcetts Road RP 0.960 to Upper Sefton Road RP 0.054) Boundary Road *20 metres north of Fawcetts Road to 210 metres north of Fawcetts Road (RP 0.268 to RP 0.098)* Marshmans Road *20 metres north of Fawcetts Road to 170 metres north of Fawcetts Road (RP 0.172 to RP 0.031)* High Street *20 metres south of Fawcetts Road to 20 metres north of Canterbury Street* *(RP 0.395 to RP 0.256)*	2	60 km/h Fawcetts Road 30km/h other roads	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Fawcetts Road. Static signs at all sites.
Cust School Earlys Road *Cust Road to 260 metres south of Cust Road (RP 4.570 to RP 4.798)* Cust Road *40 metres west of Earlys Road to 45 metres east of Cust Road (RP 16.355 to RP 16.265)*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic sign on east approach, Cust Road, and on Earlys Road. Static sign on west approach, Cust Road.

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Fernside School Swannanoa Road *65 metres south of Oxford Road to 325 metres south of Oxford Road* *(RP 2.898 to RP 2.631)* O'Roarkes Road *75 metres south of Swannanoa Road to north end of O'Roarkes Road* *(RP 0.000 to RP 0.189)*	2	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Swannanoa Road Static signs on O'Roarkes Road.
Loburn School Hodgsons Road *375 metres west of Loburn Whiterock Road to 920 metres west of Loburn Whiterock Road* *(RP 1.085 to RP 0.402)*	2	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Swannanoa Road Static signs on Hodgsons Road
North Loburn School Loburn Whiterock Road *190 metres north of Bradys Road to* *(RP 8.480 to RP 7.906)* Bradys Road *Loburn Whiterock Road to 20 metres east of Loburn Whiterock Road* *(RP 0.000 to RP 0.020)*	2	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Static signs.
One School Global Lehmans Road *20 metres south of Johns Road to 330 metres south of Johns Road* *(RP 0.912 to RP 0.587)*	2	60km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Static signs.
Rangiora Borough School Church Street *20 metres south of High Street to 65 metres south of Queen Street (RP 0.805 to RP 0.507)* King Street *20 metres south of High Street to 65 metres south of Queen Street (RP 1.608 to RP 1.311)* Queen Street	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs Church Street and King Street. Additional electronic on Queen Street to facilitate 10-minute periods on Church Street.

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
20 metres east of King Street to Church Street *(RP 0.632 to RP 0.486)*				Other Queen Street sign static.
Rangiora High School <u>East Belt</u> *110 metres north of Keir Street to 180 metres north of Wales Street* *(RP 1.169 to RP 1.739)* <u>Wales Street</u> *From East Belt to 20 metres west of Edward Street.* *(Wales Street RP 0.251 to RP 0.271 and Wales Street RP 0.225 to RP 0.005)* <u>Edward Street</u> *38 metres north of Duke Street to 120 metres north of Duke Street* *(RP 0.509 to RP 0.594)*		30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on East Belt. Additional electronic sign on Wales Street to facilitate 10-minute use on East Belt. Other Wales Street sign static, Edward Street signs static.
Rangiora New Life School / Southbrook School <u>Southbrook Road</u> *56 metres north of Pearson Lane to 53 metres south of Coronation Street* *(RP 0.628 to RP 0.318)* <u>Marshall Street</u> *From Denchs Road to 48 metres south of Torlesse Street* *(RP 0.230 to RP 0.001)* <u>Railway Road</u> *From Gefkins Road to 48 metres south of Torlesse Street* *(RP 0.603 to RP 0.740)* <u>Coronation Street/Torlesse Street</u> From Railway Road to 48 metres west of Southbrook Road. *(Coronation Street RP 0.044 to Torlesse Street RP 0.003)* <u>Denchs Road</u> *From Southbrook Road to east end of Denchs Road* *(RP 0.005 to RP 0.207)* <u>Pearson Lane</u>	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs Southbrook Road Static signs all other sites

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
From Southbrook Road to 30 metres west of Southbrook Road *(RP 0.033 to RP 0.001)*				
St Josephs School, Rangiora Victoria Street *150 metres north of Buckham Street to 150 metres south of Buckham Street* *(RP 0.609 to RP 0.304)* Percival Street 55 metres south of George Street to 95 metres north of Scott Street *(RP 1.145 to RP 1.013)* George Street *Victoria Street to 46 metres west of Percival Street* *(RP 0.200 to RP 0.005)* Scott Street *20 metres east of Murray Street to Percival Street* *(RP 0.089 to RP 0.003)* Buckham Street *20 metres west of Ivory Street to Victoria Street* *(RP 0.020 to RP 0.118)*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs Victoria Street and Percival Street Static signs all other sites
Te Matauru Primary School Pentecost Road *90 metres south of Charles Street to Johns Road* *(RP 0.799 to RP 0.424)* Townsend Road / West Belt *100 metres south of McCahon Drive to 35 metres north of Johns Road* *(Townsend Road RP 1.606 to West Belt RP 0.035)* Johns Road *27 metres east of Pentecost Road to 35 metres west of Townsend Road* *(RP 1.276 to RP 1.044)*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs Townsend Road and Johns Road. Static signs all other sites

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Charles Street *Pentecost Road to 67 metres east of Pentecost Road (RP 1.131 to RP 1.069)* McCahon Drive *Townsend Road to 30 metres west of Townsend Road (RP 0.005 to RP 0.035)*				

(c) **Notes** that the National Speed Limit Register (NSLR) will only be updated to include the variable speed limits following approval by Council to implement the changes.

(d) **Notes** that the Land Transport Rule: Setting of Speed Limits 2024 does not require a cost benefit calculation or public consultation when setting variable speed limits outside schools.

(e) **Notes** that key stakeholders including the Police and NZ Transport Agency will be notified prior to the variable speed limits being implemented.

(f) **Notes** that at the time of writing this report, co-funding for the installation of the variable speed signs has been requested but not yet approved. Staff will provide an update to the In-coming Council when the report is presented.

(g) **Notes** that implementation was subject to New Zealand Transport Agency co-funding approval which was currently under consideration.

CARRIED

9.4 **School Variable Speed Limits Proposal** – J McBride (Roading and Transport Manager) and P Daly (Road Safety Coordinator/Journey Planner)

Refer to Item 9.1 for discussion.

Moved: Mayor Gordon Seconded: Councillor Cairns

THAT the Council

(a) **Approves** the following Variable Speed Limits for the schools in the Kaiapoi-Tuahiwi Community Board area:

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Clarkville School Heywards Road From 30m south of Tram Road to 320m south of Tram Road *RP 0.030 to RP 0.320*	2	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Kaiapoi Borough School Hilton Street 105 metres south of Rich Street to the north end of Hilton Street *(RP 0.030 to RP 0.320)* Raven Quay 62 metres south of Rich Street to the north end of Raven Quay *(RP 0.246 to RP 0.000)* Rich Street / Revell Street From Hilton Street, through the Raven Quay intersection, 12 metres into Revell Street. *Rich Street RP 0.005 to Revell Street RP 0.012*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Static signs
Kaiapoi High School Ohoka Road / Ohoka Road Overpass From 45 metres west of Akaroa Street to 40 metres west of Robert Coup Road *Ohoka Road RP 0.556 to Ohoka Road Overpass RP 0.426* Robert Coup Road From 88 metres south of Glenvale Drive to Ohoka Road, 15 metres north of the first Ohoka Road intersection *Robert Coup Road RP 0.319 to Ohoka Road RP 0.216* Glenvale Drive From Robert Coup Road, 20 metres into Glenvale Drive *Glenvale Drive RP 0.000 to RP 0.020* McDougall Place From Robert Coup Road, 20 metres into McDougall Place *McDougall Place RP 0.000 to RP 0.020* Otaki Street From Ohoka Road, 50 metres into McDougall Place *Otaki Street RP 0.000 to RP 0.050*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Ohoka Road Static signs in remaining sites.

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Kaiapoi North School Williams Street 88 metres north of the Smith Street roundabout, to 80 metres north of Sims Road *Williams Street RP 2.107 to RP 2.496* Coups Terrace 20 metres into Coups Terrace from Williams Street *Coups Terrace RP 0.000 to RP 0.020* Sims Road 20 metres into Sims Road from Williams Street *Sims Road RP 0.000 to RP 0.020* Allison Place From 20 metres south of Forest Lane to 200 metres south of Magnolia Boulevard *Allison Place RP 0.556 to RP 0.253* Heney Street / Ranginui Drive Heney Street 15 metres in from Ngahau Street to Ranginui Drive, 15 metres west of Ngahau Street *Heney Street RP 0.134 to Ranginui Drive RP 0.146*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Williams Street Static signs in remaining sites.
St Patricks School, Kaiapoi Fuller Street Fuller Street 40 metres in from Williams Street to 40 metres west of Peraki Street *Fuller Street RP 0.953 to RP 0.663* Peraki Street Peraki Street 30 metres north of Carew Street to 30 metres north of Fuller Street *Peraki Street RP 0.282 to RP 0.0.583*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Fuller Street Static signs on Peraki Street

School and location of Proposed Variable Speed Limit	School Category	Proposed Variable Speed Limit	Time Zone	Signage Type
Te Kura o Tuahiwi Tuahiwi Road 220 metres south of Pitama Drive to 85 metres north of Pitama Drive *Tuahiwi Road RP 1.930 to RP 1.591*	1	30km/h	Morning – 8.20am to 9.20am. Afternoon – 2.30pm to 3.30pm	Electronic signs on Tuahiwi Road.

(b) **Notes** that the National Speed Limit Register (NSLR) will only be updated to include the variable speed limits following approval by Council to implement the changes.

(c) **Notes** that the Land Transport Rule: Setting of Speed Limits 2024 does not require a cost benefit calculation or public consultation when setting variable speed limits outside schools.

(d) **Notes** that key stakeholders including the Police and NZ Transport Agency will be notified prior to the variable speed limits being implemented.

(e) **Notes** that at the time of writing this report, co-funding for the installation of the variable speed signs has been requested but not yet approved. Staff will provide an update to the In-coming Council when the report is presented.

(f) **Notes** that implementation was subject to New Zealand Transport Agency co-funding approval which was currently under consideration.

CARRIED

13. QUESTIONS

Nil.

14. URGENT GENERAL BUSINESS

Nil.

15. NEXT MEETING

The next meeting of the Council was scheduled for Tuesday 2 December 2025, commencing at 9am to be held in the Council Chamber, 215 High Street, Rangiora.

THERE BEING NO FURTHER BUSINESS, THE MEETING CLOSED AT 11:11AM.

CONFIRMED

_____
Chairperson
Mayor Dan Gordon

_____
Date

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR DECISION

FILE NO and TRIM NO: DRA-20-41-08 / 251016197189

REPORT TO: COUNCIL

DATE OF MEETING: 2 December 2025

AUTHOR(S): Jason Recker, Stormwater and Waterways Manager

Kirtina Ismail, Waterways Engineer

SUBJECT: Woodend Box Drain Treatment Facility Upgrade Project – Approval to progress with recommended option

ENDORSED BY:
(for Reports to Council, Committees or Boards)

General Manager

pp Chief Executive

1. SUMMARY

1.1. The purpose of this report is to:

1. Update Council on the progress of the Woodend Box Drain Treatment Facility Upgrade Project.

2. Seek Council approval to progress the project to design stage, based on the recommended solution of an offline first flush basin and wetland.

1.2. The Box Drain catchment represents one of the largest areas in Woodend without comprehensive stormwater treatment. Stormwater is conveyed through a piped network, with a gross pollutant trap providing limited primary treatment. Although some treatment is in place, water quality concerns remain, as reflected in sampling undertaken in June 2025, which showed exceedances of Land and Water Regional Plan (LWRP) thresholds. Ngāi Tūāhuriri Rūnanga have also expressed ongoing concern regarding the quality of discharges from Woodend to the Tuahiwi Stream.

1.3. In 2022, Council purchased the adjoining properties at 65 and 65A Rangiora Woodend Road (total area 4.9 hectares) to enable development of a stormwater treatment facility. The site, which holds high cultural significance due to its location on Kaiapoi Māori Reserve MR873 and its connection to the Tuahiwi Stream, provides an opportunity to improve water quality outcomes for the Box Drain catchment and address concerns regarding contaminant discharges to the downstream environment.

1.4. In recognition of the cultural importance of the site and the receiving waters, the project is being co-designed in partnership with Ngāi Tūāhuriri Rūnanga to ensure meaningful engagement and culturally appropriate outcomes.

1.5. A Project Control Group (PCG) was established to oversee and guide the project's development. The PCG comprises of Council staff, with a representative from Ngāi Tūāhuriri alongside the PCG providing input on key milestone deliverables. The co-design

approach ensures that cultural perspectives are integrated from the outset and that the project remains aligned with mana whenua values and principles.

1.6. An options assessment was carried out in July 2024 that identified an offline first flush basin and constructed wetland as the recommended solution to improve the quality of stormwater runoff prior to its discharge to the receiving environment. This combined system would provide enhanced treatment performance and removal of key contaminants typical of urban runoff, such as total suspended solids (TSS) and dissolved metals.

1.7. Following the Options Assessment, the Project Control Group (PCG) recommended completing a feasibility assessment before proceeding to the design stage. The feasibility assessment was undertaken to confirm appropriate system sizing, ensure the facility would not exacerbate flooding along Gibbs Drive, and verify that the proposed first flush basin and wetland could perform effectively under variable groundwater conditions while supporting vegetation establishment.

1.8. Several investigations were undertaken to inform the feasibility report, these included site survey and groundwater monitoring, hydrogeological analysis, hydraulic modelling, and a preliminary review of consenting requirements. The findings from these investigations have been favourable, confirming that the proposed system is feasible, though not without some risk. The PCG recommends advancing to the design phase to allow for further refinement of the design and further assessment of any key risks.

1.9. The total estimated cost to progress the preferred option through design and construction is $1,419,000, based on the feasibility report. While this exceeds the currently allocated project budget, the shortfall can be funded through a reassignment of the existing Woodend consent implementation budget, which is appropriate given the project's stormwater quality benefits and alignment with the original funding intent. No increase to the overall budget is required, and therefore there will be no additional impact on rates. Approval for this budget reassignment will be sought through the 2026/27 Annual Plan process.

1.10. The proposed project programme is as follows:

Table 1 - Proposed Project Programme for the Woodend Box Drain Treatment Facility Upgrade Project

Timeframe	Description of Activity
2 December 2025	Council Meeting (Approval to progress to tender and award preliminary and detailed design stage)
January - March 2026	Tendering and Award of Design
April - May 2026	Preliminary Design
June - July 2026	Agreement from Iwi on Preliminary Design
August - November 2026	Detailed Design
May – July 2027	Construction tendering
August 2027	Construction tender award - Subject to Council approval
Summer 2027/2028	Construction

Attachments:

i. Box Drain Stormwater Treatment Facility Options Report TRIM 240925164512

ii. Box Drain Feasibility Report TRIM 251009192497

2. RECOMMENDATION

THAT the Council:

(a) **Receives** report No. 251016197189.

(b) **Authorises** Council staff to progress the Woodend Box Drain Treatment Facility Upgrade Project to the design stage, based on the recommended solution of an offline first flush basin and wetland which currently has an estimated cost of $1,419,000 for design and construction.

(c) **Notes** that the total project cost of $2,451,659 (when including the land acquisition and other costs to date) can be funded by $2,215,750.00 from Box Drain Improvements (PJ 101736.000.5123) with an additional $236,000.00 from Woodend Global Consent Implementation Works budgetto be allocated to this project.

(d) **Notes** that the total combined budget of $2,451,750 is funded by multiple sources being the sale of the property once the project is complete ($600,000), Better of Funding ($1,100,000) and through loan funds/rates ($751,750).

(e) **Notes** that Ngai Tūāhuriri Rūnanga have had a representative involved in the feasibility stage and will also be involved in reviewing and providing feedback on the next design phases.

(f) **Notes** that the preliminary and detailed design are intended to be undertaken by an external consultant, and that a request for proposal will be issued following Council approval to proceed to the design stage.

(g) **Notes** that this work will utilise existing Coastal Urban Drainage capital works budgets from the Woodend Box Drain Improvements Project and the Woodend Global Consent Implementation Works.

(h) **Notes** that Council staff will be requesting realignment of budgets as part of the 2026/27 Annual Plan process.

(i) **Notes** that if the above recommendations are approved, the staff will progress to tendering and awarding the design components of the project in keeping with the Delegations Manual, but the construction of the project will not commence until the Council has approved the construction tender award.

(j) **Circulates** this report to the Woodend-Sefton Community Board for information.

3. BACKGROUND

3.1. The Box Drain services an upstream urban catchment of approximately 27 hectares within the Woodend township. This catchment is referred to as “The Box Drain” catchment (see Figure 1). The Box Drain originally was a simple box lined drain that was in 2007 converted to a pipe and overflow swale system, with a gross pollutant trap (GPT) upstream of the system. This improvement was carried out following an issues and options report for the Woodend Box Drain (refer Trim 05052600020) that was completed in June 2005.

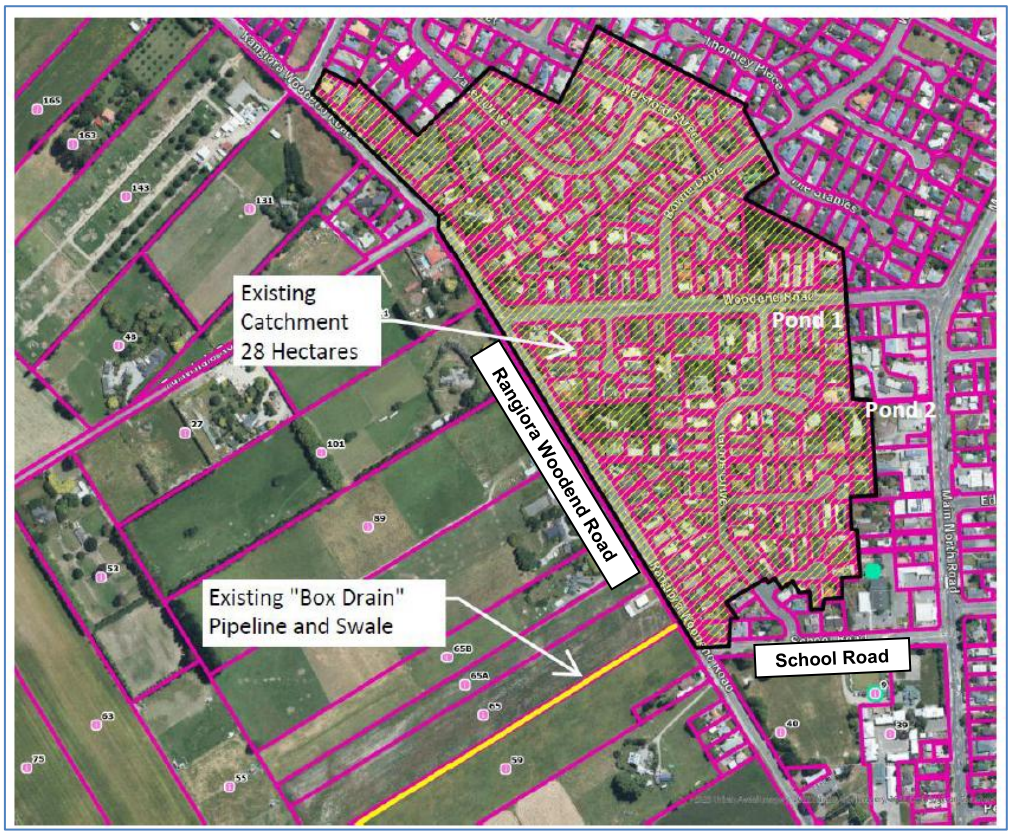


Figure 1: Site location- the site is outlined in red and the existing stormwater network in green

3.2. The Box Drain catchment is one of the largest remaining areas in Woodend without comprehensive stormwater treatment, whereas the Ravenswood, East Woodend, and Panckhurst catchments are already serviced by dedicated stormwater management systems that provide treatment and retention prior to discharge to the environment.

3.3. In addition, the Box drain discharges into MR873, and concern has regularly been expressed by Ngai Tūāhuriri Rūnanga about this discharge.

3.4. Upstream of the Box Drain is the Woodend urban residential stormwater network consisting of sumps collecting the stormwater runoff from roof and road areas. This is transported by a pipe network that discharges through the gross pollutant trap (GPT) at 63 Rangiora Woodend Road into a 675mm diameter pipe down to the outlet near the boundary of the drainage reserve and 55 Turiwhaia Road. There is a high-level overflow into the swale on the 1500mm diameter manhole upstream of the GPT.

3.5. The GPT treats stormwater runoff by capturing coarse sediment in its sump and trapping hydrocarbons with a siphoned outlet. However, despite the gross pollutant trap, both monitoring results and feedback from Ngāi Tūāhuriri Rūnanga indicate that water quality remains a concern. Sampling has confirmed exceedances of LWRP thresholds, and there is still a perception among Ngāi Tūāhuriri that the discharge from Box Drain to the Tuahiwi Stream tributary is of poor quality.

3.6. Recent water sampling done in June 2025 at the Box Drain outfall confirms exceedances over the LWRP 90% thresholds for Dissolved Reactive Phosphorus, E. Coli and Total Zinc (including Dissolved Zinc) were observed at the outfall of the Box Drain.

3.7. The Box Drain discharges into an open channel that flows into the Tuahiwi Stream (Figure 2). Similarly, several rural farm drains service surrounding properties and converge at various points before also entering the Tuahiwi Stream. Consequently, the runoff entering

the Tuahiwi Stream comprises a mix of urban residential stormwater (from roofs and roads) and rural agricultural runoff.

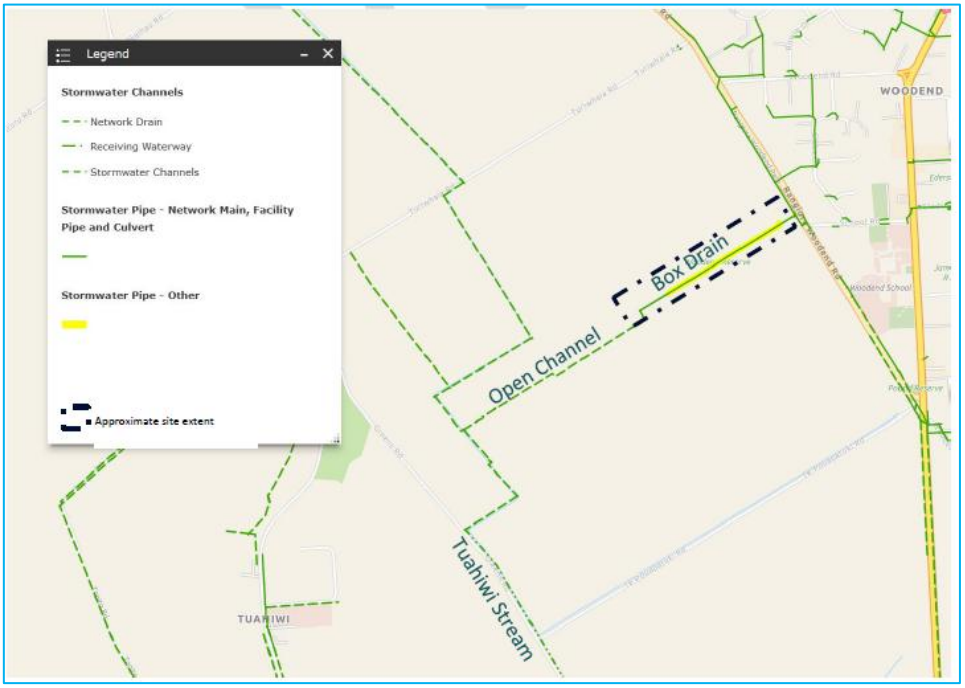


Figure 2 - Drainage network for Box Drain

3.8. In September 2022, Council approved the purchase of property located at 65 and 65A Rangiora Woodend Road adjacent to the Box Drain (Figure 3). Total area of the site is 4.9 ha. Part of the property at 65 and 65A Rangiora Woodend Road has been allocated for the stormwater treatment facility. On the balance of the property is a regular shaped parcel containing a dwelling and other built improvements. The dwelling is currently tenanted with the remaining land leased for grazing.

Figure 3 - 65 and 65A Rangiora Woodend Road

3.9. The purchase of this property for a stormwater treatment facility provides an opportunity to address some of the concerns that had been previously raised by the Ngāi Tūāhuriri Rūnanga regarding the discharge of urban stormwater contaminants into the Tuahiwi Stream which flows through Maori Reserve MR873.

3.10. In order to ensure good engagement, the Council approached Ngai Tūāhuriri Rūnanga about developing a co-design framework between Waimakariri District Council and Ngāi Tūāhuriri Rūnanga for the proposed stormwater facility upgrade on Box Drain. This was to recognise the high cultural value of the reserve land and the need to identify sensitivities around its use for stormwater treatment, as well as to establish appropriate co-design arrangements.

3.11. Management Team approval was granted on 1 May 2023 (TRIM 230425057576) to directly engage Storm Environmental for the development of the co-design framework and development of a concept design.

3.12. A Project Control Group ("PCG") was established to guide the project. Membership includes a number of Council staff, and a representative from Ngāi Tūāhuriri Rūnanga. A gateway engagement process was agreed to at project initiation is set out below (Figure 4) with the green box showing work complete and the red dashed box indicating the current stage.

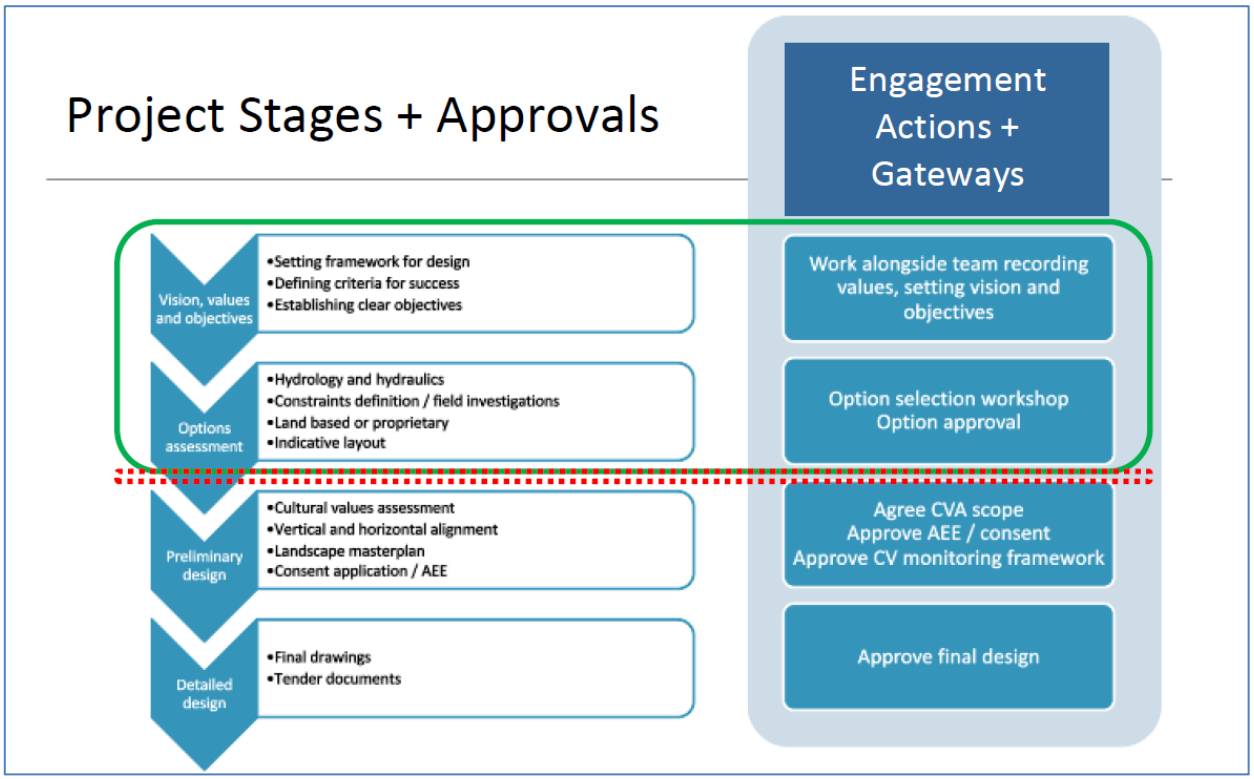


Figure 4 - Approvals gateways and current progress

3.13. During the PCG meeting held in March 2024, the project team established the values, vision, and objectives for the Box Drain Treatment Upgrade (Attachment i). A vision statement was developed through a workshop session and reflects the project's cultural and environmental aspirations:

"Improve water quality from the Box Drain catchment to increase mahinga kai opportunities in Tuahiwi Stream and enhance the cultural values of the whenua."

Options Assessment

3.14. With the values, vision and objectives established, an Options Assessment (Attachment i) was carried out by Storm Environmental in July 2024. The options assessment firstly considered a broad range of options for stormwater treatment at the site, and then further evaluates three shortlisted options:

1. An online first flush basin (ephemeral wetland) and wetland
2. An offline first flush basin (ephemeral wetland) and wetland
3. A gravity fed proprietary filtration device

3.15. The assessment identified an offline first flush basin and wetland as the preferred solution to improve the quality of stormwater runoff prior to its discharge to the receiving environment.

3.16. The first flush basin operates to provide treatment of the initial portion of stormwater runoff during a rain event (first flush), which is typically calculated to be 25 mm of rainfall and contains the highest concentrations of pollutants such as sediments, heavy metals, and nutrients. This basin will store the first flush, allowing time for contaminants to settle and particulate matter to be removed before stormwater continues on to the wetland for further secondary treatment. During larger events, flows will be split, with bypass flows conveyed via the existing pipe and swale.

3.17. The wetland provides secondary treatment through biological and chemical processes (microbial breakdown, adsorption, filtration, and plant uptake) which further reduce pollutants and enhancing water quality before it is discharged into the downstream open channel.

3.18. This combined system would provide enhanced treatment performance and removal of key contaminants typical of urban runoff, such as total suspended solids (TSS) and dissolved metals. (See Figure 5).

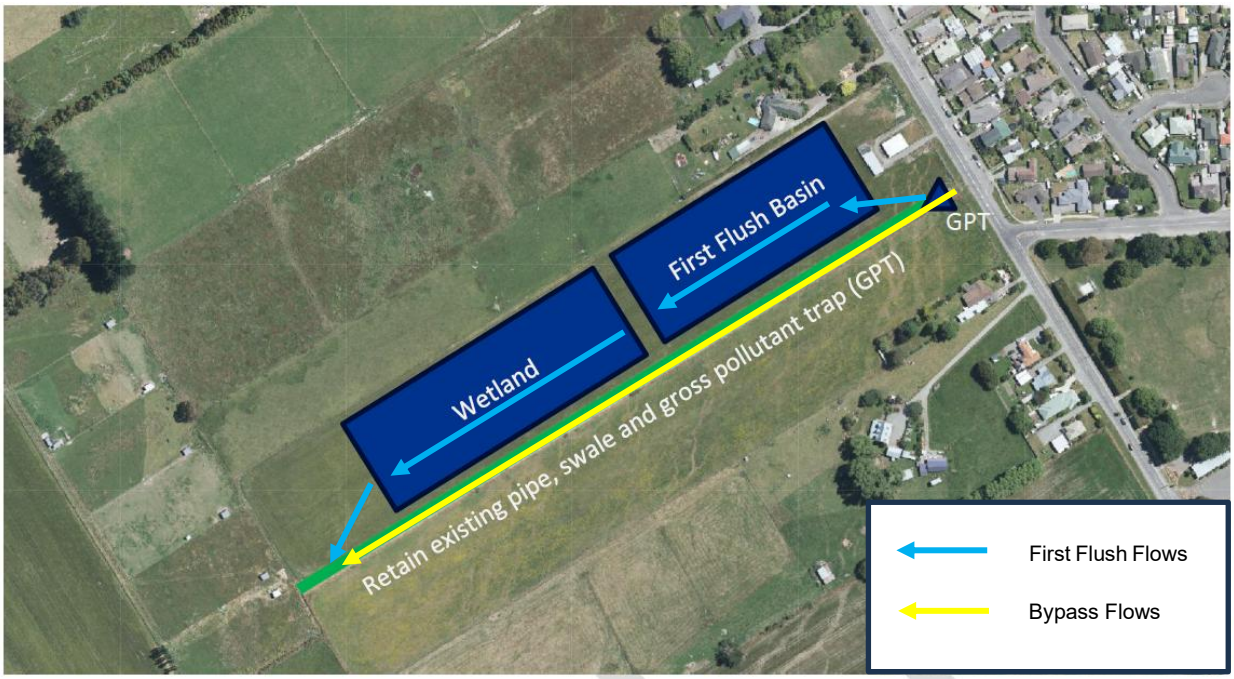


Figure 5: Indicative system layout of the recommended solution

3.19. This option also allows reuse of the existing infrastructure (GPT, swale and pipe). The existing pipe and swale will be reused to bypass larger flows, while directing the initial untreated first flush runoff into the combined system for treatment. This configuration is termed as an offline system and reduces the risk of washing the untreated first flush water through the treatment system during a high flow event.

3.20. The options assessment was carried out in collaboration with a representative from Ngāi Tūāhuriri, whose support and agreement were obtained for the recommended solution. Following this endorsement, the project advanced into the preliminary investigations and feasibility stage.

Feasibility Report

3.21. Following the Options Assessment, the Project Control Group (PCG) recommended undertaking a feasibility assessment prior to further design. This was because elevated groundwater levels were identified on site, raising into doubt the ability for the recommended solution to perform satisfactorily. In addition the feasibility assessment would provide more information on how the groundwater would influence the facility's configuration, footprint, and treatment performance, and therefore the financial case. This was particularly important given the underlying intention to separately dispose of the existing dwelling.

3.22. The assessment also aimed to ensure the proposed facility would not exacerbate flooding along Gibbs Drive and that the design could operate effectively under variable groundwater conditions. In particular, it sought to verify that the first flush basin and

wetland configuration would support vegetation establishment and maintain performance without prolonged inundation.

3.23. Storm Environmental was engaged to undertake the feasibility study. The Feasibility Report objectives were to:

1. Describe the feasibility of the scheme
2. Update the preferred option description, form, features and overall footprint of the facility considering the further information.
3. Develop an indicative plan for proposed system.
4. Illustrate how the cultural objectives may be incorporated into the design
5. Provide an indicative cost estimate

3.24. The following investigations were undertaken to inform the feasibility report

1. Collection of field data; topographic survey (Council), groundwater level and Box Drain water level data has been collected (WSP)
2. Investigations into and analysis of the hydrogeology at the site (WSP)
3. Updating of the hydraulic model and testing the proposed scheme (Council)
4. Preliminary review of consenting requirements for the facility (Council)

3.25. The proposed treatment system is shown below, described from upstream to downstream. An indicative layout from the feasibility report is provided in Figure 6, with a corresponding long section available in Attachment ii.

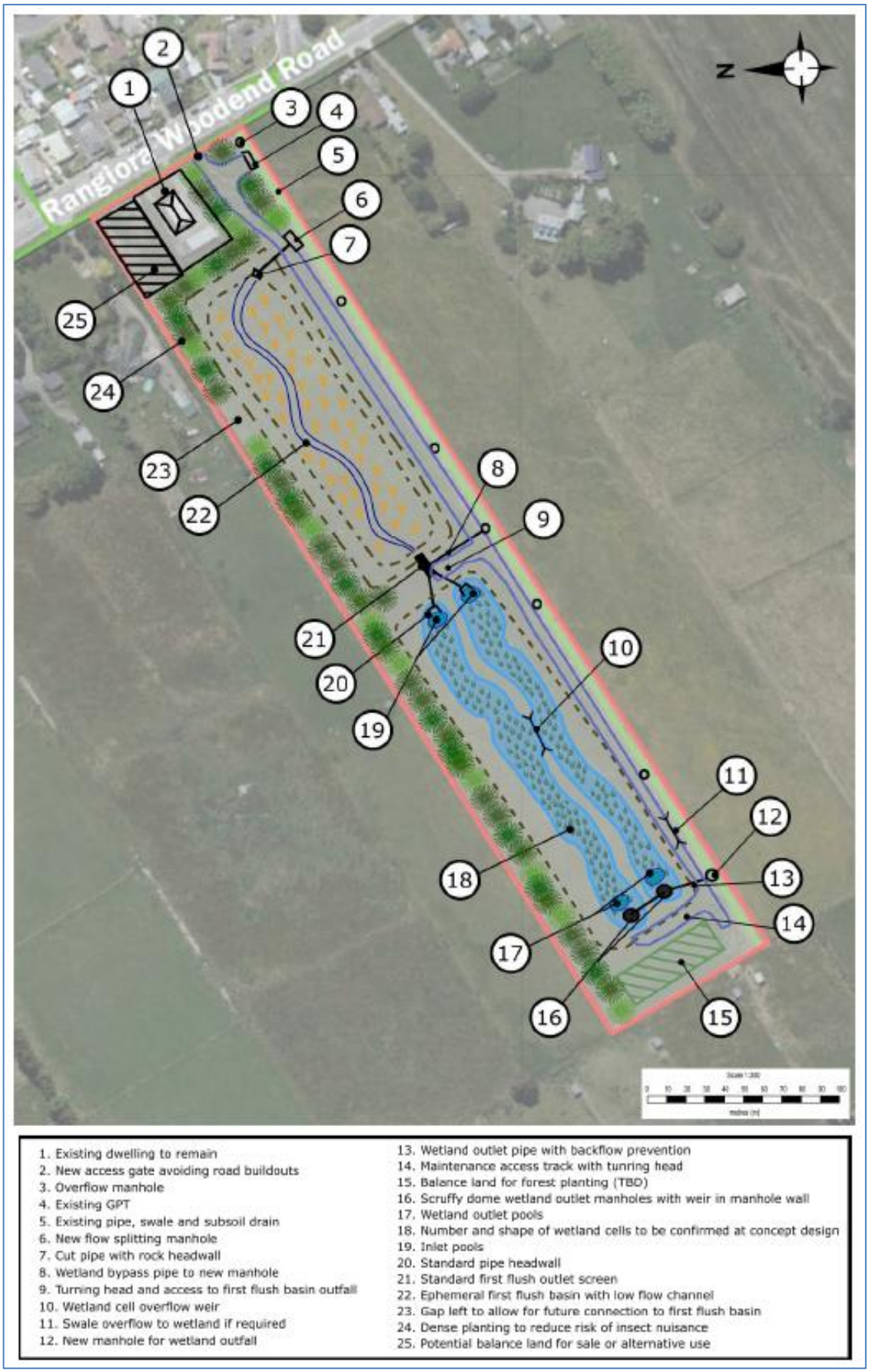


Figure 6: Indicative Layout of Proposed system arrangement and key features

3.26. The table below demonstrates how objectives tied to cultural values, as identified in the Options Assessment Report in collaboration with our representative from Ngāi Tūāhuriri, have been thoughtfully incorporated into the design.

Table 2 – Implementation of objectives identified in the values, vison and objectives workshop

Objective	Implementation
Land restoration in accordance with the black maps	The selection of an ephemeral wetland first flush basin followed by a surface water wetland aligns with the Canterbury Black Maps, with the lower half of the site likely to contain wetlands historically. The landcover of the upper half of the site is noted as herbaceous (mixed) and therefore planting with open scrubland plants would be appropriate
Support customary use, but do not encourage recreation on site	Public access is not planned for the site, rather a maintenance access track will be installed, which may be utilised by mana whenua to access the site for customary purposes. Screening the site from the road with dense vegetation could reduce public interest in the site. Signage should be avoided Additionally balance land could be utilised for customary purposes (e.g. pā harakeke)
Support downstream restoration of mahinga kai and ensure fish passage needs are met	To protect the aquatic environment and ensure separation from stormwater contaminants the facility has not been designed for fish ingress. However, the inlet and outlet pools are of sufficient depth to act as refuge if aquatic species enter the facility (particularly tuna) and periodic maintenance will include checking the pools for stranded fish. Outlet pipes will also have backflow prevention devices installed, which limit ingress, but allow egress
Promote bird species recovery through habitat restoration	The first flush basin and wetlands will have a variety of depths, providing suitable habitat for wading and diving birds. Plant selection of forested areas will take into account flowering times to ensure a food source for nectar feeding birds and insect populations will provide a food source for insectivore birds
Ensure facility does not create a nuisance insect issue	Dense plantings of native species around the perimeter of the site will provide a screening effect reducing the number on insects leaving site. Additionally, these plantings will provide habitat to birds which will reduce the nuisance insect population
Provide water quality and quantity management to reduce burden on downstream habitat and sites of significance	The selected preferred option to be carried through to concept design of an ephemeral first flush basin followed by a treatment wetland meets this objective

Ensure facility has capacity to support further development in the catchment	During concept design a decision on any balance land needs to be made, with an option to increase the facility size to account for increased development Landscaping along the northern edge of the facility will allow for additional connections into first flush basin if development occurs to the north of the facility

3.27. The findings from the additional investigations undertaken to determine feasibility of the project have been favourable. Overall, the proposed system is considered feasible, but not without risk. Progressing to the next design phases will enable design refinement and further risk evaluation. The conclusions from the Feasibility Report are:

1. The excavation for both the first flush basin and the treatment wetland will be deep enough to occasionally intercept groundwater. However these expected groundwater potential inflows are small compared to stormwater treatment flow and can be accounted for in the system design. This will include assuming wet basins, choosing appropriate plantings, and careful consideration of the vertical design of the system.
2. Hydraulic modelling of the proposed system highlighted flood reduction benefits and confirmation that the system would be able to effectively drain the initial runoff which carries the most contaminated water (first flush), although this will need further refinement during next design stages.
3. An initial assessment of consenting requirements undertaken by WDC did not highlight significant concerns but highlighted the advantages of keeping any groundwater interception below 5 l/s to avoid the need for water metering. Overall, it was concluded that it is likely that the system will be able to be consented based upon the WSP estimation of groundwater take.
4. The cost estimate to design and construct the facility that was prepared for the project has uncertainty, given the current stage of design. This cost estimated is outlined in the financial implications section of this report. An appropriate level of contingency has been allowed.

3.28. Based on the findings of the feasibility it is the recommendation of the PCG that advancing to the design phase to allow for further refinement of the design and further assessment of any key risks.

4. ISSUES AND OPTIONS

The Council has the following options available to them:

4.1. **Option 1 –** Authorise staff to progress with the tendering process for the design stage of the project.

This **is** the recommended option for the following reason:

- Council staff have confirmed agreement from Whitiora on behalf of Ngāi Tūāhuriri on the recommended solution and proposed approach for the facility. A copy of the Feasibility Report has been provided to their representative, and any feedback received will be incorporated into the next stages of design where feasible.
- The recommended solution has been assessed through the feasibility investigations, which specifically addressed key risks including groundwater levels, flooding, and water quality performance. With these risks considered, the project is ready to progress to the design stage. Advancing now will ensure the project remains on track for construction as programmed in Summer 2027/28.

4.2. **Option 2** – Delay progressing to design stage and request staff to undertake further work to re-evaluate other potential solutions for treatment.

This is **not** the recommended option for the following reasons:

- Council staff have already undertaken additional investigations to confirm the feasibility of the recommended solution, with identified risks thoroughly assessed and incorporated into the feasibility report and project programme.
- Deferring progression to the next design stages would result in significant delays to the project timeline and likely push construction beyond the 2027/28 financial year.

4.3. The Management Team have 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.

Engagement with mana whenua has been a key focus for this project, with the following coordination and co-design actions undertaken:

- A co-design framework was developed between Waimakariri District Council and Te Ngāi Tūāhuriri Rūnanga for the proposed stormwater facility upgrade at 65–65A Rangiora-Woodend Road.
- The framework reflects the high cultural value of the reserve land and ensures sensitivities regarding stormwater treatment use are appropriately considered.
- A Project Control Group (PCG) was established to guide project development, comprising Council staff and a representative from Ngāi Tūāhuriri.
- The gateway engagement process agreed at project initiation provides structured review and input at key milestones
- A shared vision statement developed through co-design reflects cultural and environmental aspirations:

  "Improve water quality from the Box Drain catchment to increase mahinga kai opportunities in Tuahiwi Stream and enhance the cultural values of the whenua."

- The Options Assessment phase was undertaken collaboratively with Ngāi Tūāhuriri input, securing their support for the preferred solution.
- Council has provided the Feasibility Report to Ngāi Tūāhuriri for feedback, which will be incorporated where feasible.
- Ongoing engagement will occur through agreed design stage touchpoints to ensure continued alignment with mana whenua values and opportunities for review and comment. There is likely to be a significant hold point during the design process to ensure broad engagement takes place with the Rūnanga.

5.2. Groups and Organisations

The Woodened-Sefton Community Board are likely to be affected by, or to have an interest in the subject matter of this report. This report will be circulated o them after the Council has considered the matter.

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 as this focuses on the detail of a Stormwater Management Area in a specific area, with no wider impact beyond the immediate community.

The wider community has been given an opportunity to comment to Council on the budget and this project through the LTP and Annual plan and will have the continued ability to do this in the 26/27 Draft Annual Plan consultation.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

The estimated total cost to progress the preferred option through design and construction is $1,419,000 based on the estimate developed in the feasibility report (Attachment ii).

This estimate indicates that the existing allocated project budget is insufficient (see Table 3) to deliver the full scope of works required. However, there is an existing budget approved for Woodend consent implementation works that can be realigned to support delivery of this project. As the proposed works are aimed at improving stormwater quality outcomes, utilising a portion of that budget is considered appropriate and consistent with the original funding objectives of enhancing water quality.

Table 3 - Existing budget and forecast expenditure

Item	**Box Drain Improvements (PJ 101736.000.5123**
Total Budget [a]	**$2,215,750**
Land Acquisition [b]	$830,000
Spent to Date [c]	$202,659
Design Estimate [d]	$210,000
Construction Estimate [e]	$1,209,000
Total Project Estimate[e] (=d+e)	$1,419,000
Total Forecast Expenditure [f] (= b+c+d+e)	**$2,451,659**
Remaining Budget [g] (= a - f)	**($235,909)**

The revised budget shown in Table 4 will be proposed through the upcoming 2026/27 Annual Plan process to ensure adequate funding for the 2026/27 and 2027/28 years.

It is important to note, no increase to the overall budget is required (and therefore there will be no additional impact on rates). The shortfall will be covered from the Woodend Global Network Discharge Consent Works Budget. Approval for reassignment of the budget will be sought as part of the 2026/27 Annual Plan process as outlined in table 4 below.

Table 4 Current and Proposed Budgets for Woodend Box Drain Treatment Facility Upgrade

	Current budgets 25/26 AP	**Proposed revised budget 26/27 AP**	
Financial Year	**Budget Code: 101736.000.5123**	**Budget Code: 101736.000.5123**	**Woodend Global Consent Implementation Works**
*FY21/22	$830,000.00	$830,000.00	
FY25/26	$391,100.00	$391,100.00	
FY26/27	$994,650.00	$25,000.00	
FY27/28		$969,650.00	$236,000.00
Total	**$2,215,750.00**	**$2,215,750.00**	**$236,000.00**
Grand Total	**$2,215,750.00**	**$2,451,750.00**	

*Land acquisition costs ($830,000) were capitalised in 2022 and are included in the above figures in order to present the full project budget.

Woodend Global Consent Implementation Works Budget

A Stormwater Management Plan (SMP) for Woodend is required under the Stormwater Network Discharge Consent (CRC195459) and is scheduled for completion by June 2027. The SMP will outline measures to minimise the adverse effects of stormwater discharges on water quality and quantity, protect cultural sites, and enhance mahinga kai. It will also identify the best practicable options to achieve consent compliance and deliver improved water management outcomes, including the implementation of stormwater quality improvement projects.

The 2024–2034 Long Term Plan allocates $2.7 million for SMP-related projects, with works programmed to commence from 2027/28 through to 2032/33. As the Box Drain catchment is the largest untreated area within the Woodend urban boundary, applying the 2027/28 SMP capital budget of $236,000 to address the project funding shortfall aligns with these funding intentions. This approach aligns with the objectives of the SMP by delivering water quality improvements to meet consent requirements and enhance environmental outcomes across Woodend's stormwater network.

6.2. Project Funding

Outlined in Table 5 below are the specific funding streams identified for this project.

Table 5:Sources of funds for Box Drain

Income	Amount	Notes
Sale of Property	$600,000	Estimated value. Property to be sold once project construction is complete.
Better Off Funding	$1,100,000	Claimed to date $1,032,959 Remaining $67,041 to claim.
Loan Funded/Rates	$751,750	Existing capital budget from Coastal Urban drainage scheme.
Total	**$2,451,750**	

Subdivision and Sale of Property

It has always been the intention that once construction of the first flush and wetland is completed then the land would be subdivided with the section with house sold and the funds put back into the project (see figure below). The current high level estimate is that is expected to have a value of $600,000.

Figure 7 - Property to be subdivided and sold up on completion of the project.

Better Off Funding

The Box Drain Improvements project was included in Tranche 1 of the Better Off Funding, approved in November 2022 (TRIM 220911157300). This funding, provided by the Department of Internal Affairs (DIA), supports local government initiatives that enhance community well-being. A total of $1,100,000 was allocated to the Box Drain Improvements project.

To date, $1,032,959 of the allocated funding has been claimed, with the majority used for land acquisition. The remaining $67,041 is expected to be claimed during the design phase in 2025/26 and potentially 2026/27. All funding must be fully claimed by the end of the 2026/27 financial year, which is expected to be achieved.

6.3. Sustainability and Climate Change Impacts

The recommendations in this report do have sustainability and/or climate change impacts. The project design will consider projected climate change impacts to ensure the facility remains resilient and functional under future environmental conditions. The treatment and retention performance will improve the sustainability of the downstream receiving environment.

6.4. Risk Management

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

There is a risk to Council's reputation if the project is delayed. In addition, there is a potential risk of cost overruns, which may require seeking additional budget to complete the works as planned.

6.5. Health and Safety

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

Health and Safety of any site visits that may be required during preliminary and detail design stage will be managed through the contract administration process and the consultant's health and safety plan.

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

The Local Government Act is relevant in this matter.

7.3. Consistency with Community Outcomes

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

- Core utility services are sustainable, resilient, affordable; and provided in a timely manner
- There is a safe environment for all

7.4. Authorising Delegations

The Council has the delegated authority to approve the recommendations in this report.

STORMWATER TREATMENT FACILITY OPTIONS

Box Drain Woodend

Final

Waimakariri District Council

12 July 2024

STORM ENVIRONMENTAL LTD

Box Drain Stormwater Treatment Facility Options Report

Project No:	STRM-WDC01
Document Title:	Box Drain Stormwater Treatment Facility Options Report
Revision:	E
Date:	12 July 2024
Client Name:	Waimakariri District Council
Author:	Tom Parsons
	Stephanie Dijkstra

Document history and status

Revision	Date	Description
A	17 April 2024	Draft for client review
B	1 May 2024	Updated report to NZVD
C	29 May 2024	Issue to PCG
D	18 June 2024	Updated for PCG comment
E	12 July 2024	Final

Cover photo courtesy of Waimakariri District Council

Contents

1 Introduction

Waimakariri District Council ("Council") engaged Storm Environmental Ltd to consider a range of feasible options for stormwater management of flows entering Box Drain from part of the existing urban area of Woodend, and then recommend a preferred option. The drain is of significance to local mana wheuna as it discharges into Tuahiwi Stream, and is located on Kaiapoi Māori reserve MR873, and ultimately enters Ruataniwha awa (Cam River).

Council recently purchased the property at 65-65A Rangiora Woodend Road and has proposed the development of a stormwater treatment facility.

This report firstly considers a broad range of options for stormwater treatment at the site, and then further evaluates three shortlisted options using a two step process. The shortlisted options are:

1. An online first flush basin (ephemeral wetland) and wetland
2. An offline first flush basin (ephemeral wetland) and wetland
3. A gravity fed proprietary filtration device

A Project Control Group ("PCG") has been established to guide the project. Membership includes a number of Council staff, and a representative from Ngāi Tūāhuriri. The proposed gateway engagement process as agreed at project initiation is set out below (Figure 1) with the green box showing work complete and the red dashed box indicating the current stage. This report will enable selection of the preferred option at a subsequent PCG meeting / option selection workshop.

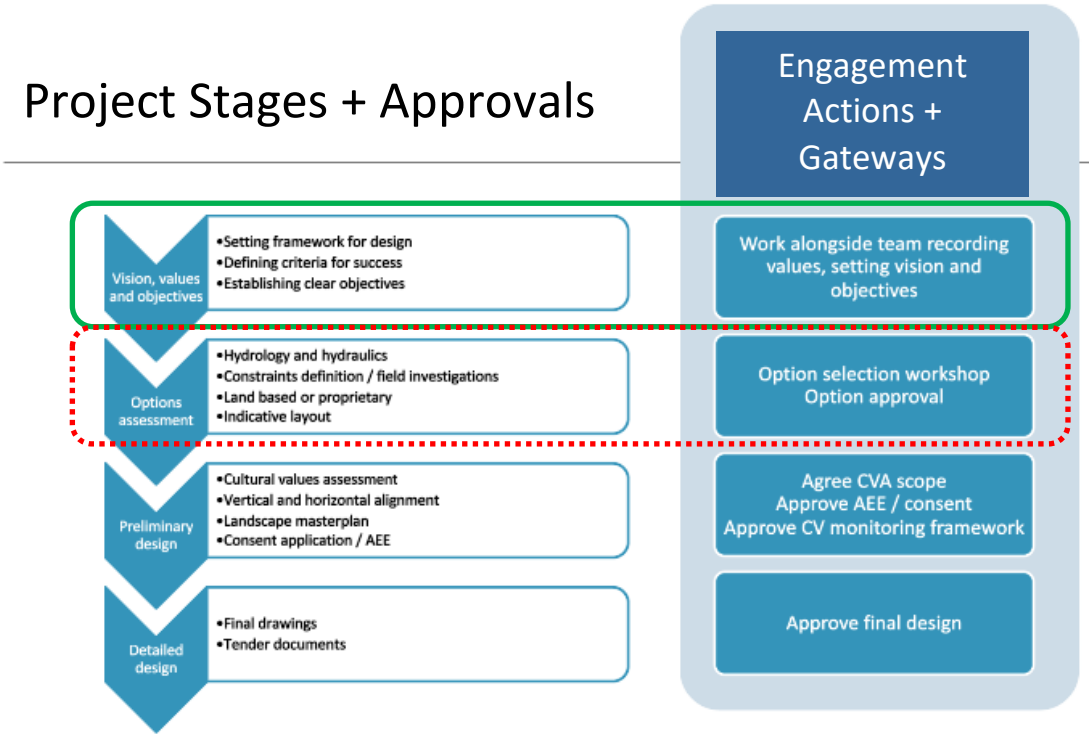


Figure 1 Approvals gateways and current progress

All levels used in this report are in New Zealand Vertical Datum 2016 (NZVD) unless otherwise stated. As-built data for the Box Drain provided in Appendix A.1 and the hydraulic model long section are in Lyttelton Vertical Datum 1937 (LVD37) (*pers. comms C. Bacon (WDC) 29/4/24)*. LVD37 is taken as 0.35m below NZVD. Topographic survey data has been collected and was supplied upon finalisation of this report. This data will be considered at the next design stage.

Existing hydraulic model results are provided in LVD37 but as the model has now been converted to NZVD2016 any future model results will be in the modern datum.

2 Project vision, values and objectives

During the PCG meeting on the 12th March 2024 the values, vision and objectives for the Box Drain treatment upgrade were established. The draft vision statement developed in the workshop is:

> *"Improve water quality from the Box Drain catchment to increase mahinga kai opportunities in Tuahiwi stream and enhance cultural values of the whenua."*

The values and objectives discussed at the meeting are provided below (Table 1).

Table 1 Project values

Value	Objective	Commentary
Native Biodiversity	Restore the Whenua utilising the black maps as a guide	The black maps and historic imagery show the NE extent of box drain passing through a grassland complex, with grasses, flax and tutu. The rest of the site was part of the wetland complex with stream channels running through the southern part of the site
	Return parts of site to a forested wetland over the long term (50+ yrs)	Establish nursery plantings at first and then move towards taller species over time
	Seek fish egress, but not ingress	Ongoing fish salvage operations may be required to remove native fish species from facility and translocate them to a more appropriate location
	Promote bird species recovery	Guided by Ngāi Tūāhuriri as to species previously found here. Ensure plants selected provide adequate protection and have adequate food sources (e.g. mikimiki (coprosma), manuka etc) Will also aid in nuisance insect management
Customary use	Make the site available for Ngā Tūāhuriri whanau to harvest harakeke (flax) and other plants (where appropriate)	Where appropriate use weaving varieties of harakeke (flax) Integrate rongoā species into edge planting Improvements in the quality of stormwater discharge from box drain will support customary use downstream of the discharge
	Limit recreational use by wider public	Do not actively promote public use on MR873 reserve land by limiting signage and managing street frontage
Water Management	Improve downstream water quality	Focus on treatment of TSS, heavy metals (particularly zinc), oil interception, PAH
	Give effect to Te Mana o te Wai	Avoid mixing of springs and stormwater Baseflow channel to provide waterway definition
	Attenuate flood flows, where possible, and maintain drainage	Slow the discharge of water from box drain in 1-5 year ARI noting further baseflow monitoring needed
	Allow for future flows	Facility to enable connection of neighbouring MR873 (upgradient) properties
Maintenance	Enable maintenance through the design	Easy access for sediment removal from first flush basin Express the ongoing maintenance requirements for the facility

While the above values and proposed options are in keeping with the Mahaanui Iwi Management Plan *("Stormwater swales, wetlands and retention basins are appropriate land-based stormwater management options – Ngāi Tahu Subdivision and development guidelines 2.2 and Policy P6.1")* the project team acknowledge the sensitivity of the area.

3 Site description and investigations to date

The 4.9ha site is located at 65-65A Rangiora Woodend Road (Figure 2), adjoining the existing Woodend urban extent and within Kaiapoi Māori reserve MR873. The site is primarily in agricultural use with one residence on site. Box Drain is located within the site, which comprises of a 900mm pipe upstream of a basic stormwater filtration gross pollutant trap device, followed by a 675mm diameter pipe beneath a swale (refer Appendix A.1 for as-built plans). Flows from the urban area that are collected in the stormwater network upstream are discharged from the site with only a basic level of treatment provided by the gross pollutant trap. Box Drain downstream of the site is formed as an open channel and drains into Tuahiwi Stream (Figure 3).

The black maps (Figure 4) do not provide detail across the entire site. Canterbury Regional Council digitisation of the original maps indicate mixed grass, flax and tupaki[1] (tutu), although the extent of this vegetative cover are labelled as 'less certain'. The planned cultural values assessment may provide further details on past land cover.

Figure 2 Site location: the site is outlined in red and the existing stormwater network in green. The North

[1] This is likely a miss-spelling of tūpākihi or tutu given the prevalance of tutu identified in other areas around the Waimakariri River

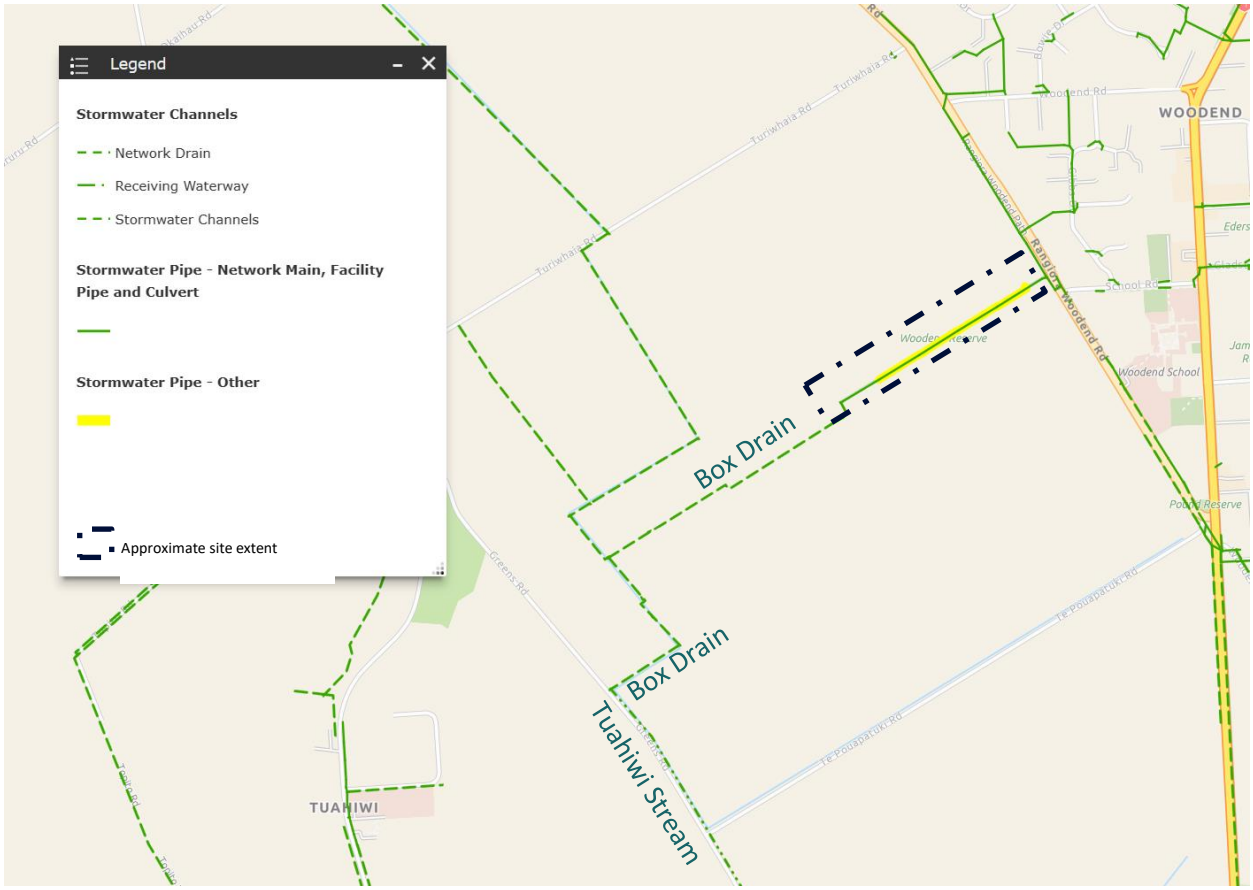


Figure 3 Drainage plan (Source: Council OpenMap Viewer)

Figure 4 Black maps (Source: Canterbury Maps [ECan])

Prior ecological surveys of the Tuahiwi Stream and the Ruataniwha (Cam) River are indicative of freshwater species that may be present in the existing pipe below the swale and downstream of the discharge point. These species are inanga (whitebait), tuna (eels), kanankana (lamprey), kekewai (freshwater crayfish), kakahī (freshwater mussels), kokopu and tipokopoko (bullies). At the time of finalising this report further ecological survey data and reporting was received. The report, *Woodend Box Drain Freshwater Ecology Values* (Boffa Miskell 2024), will be considered at the next design stage.

There is approximately 1 m fall across the site (Figure 5).

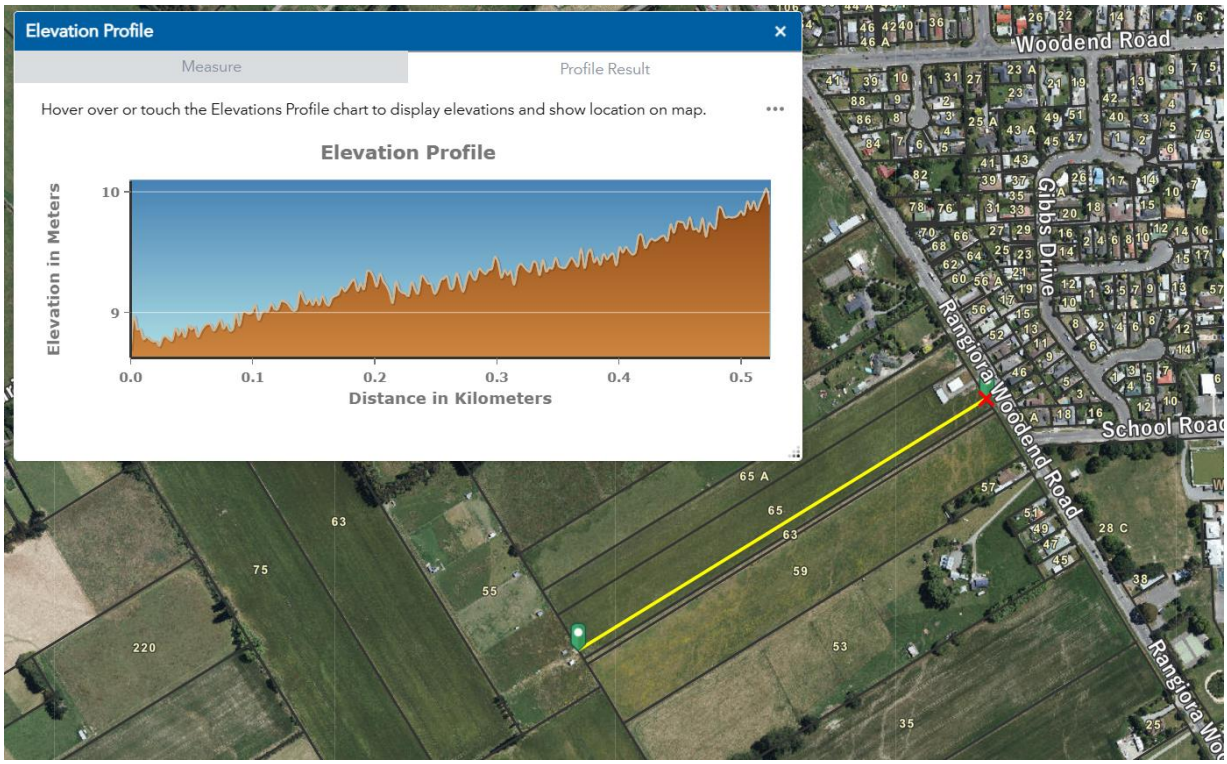


Figure 5 Site cross-fall (Source: Canterbury Maps [ECan])

The upstream catchment is approximately 28 ha with residential land use (Figure 6) that is effectively 'fully developed'. The hydraulic grade up the network is constrained by ground levels in Gibbs Drive. The kerb level in Gibbs Drive is approximately 10m, which is assumed to be the highest permissible level in the water quality storm event (i.e. no street flooding).

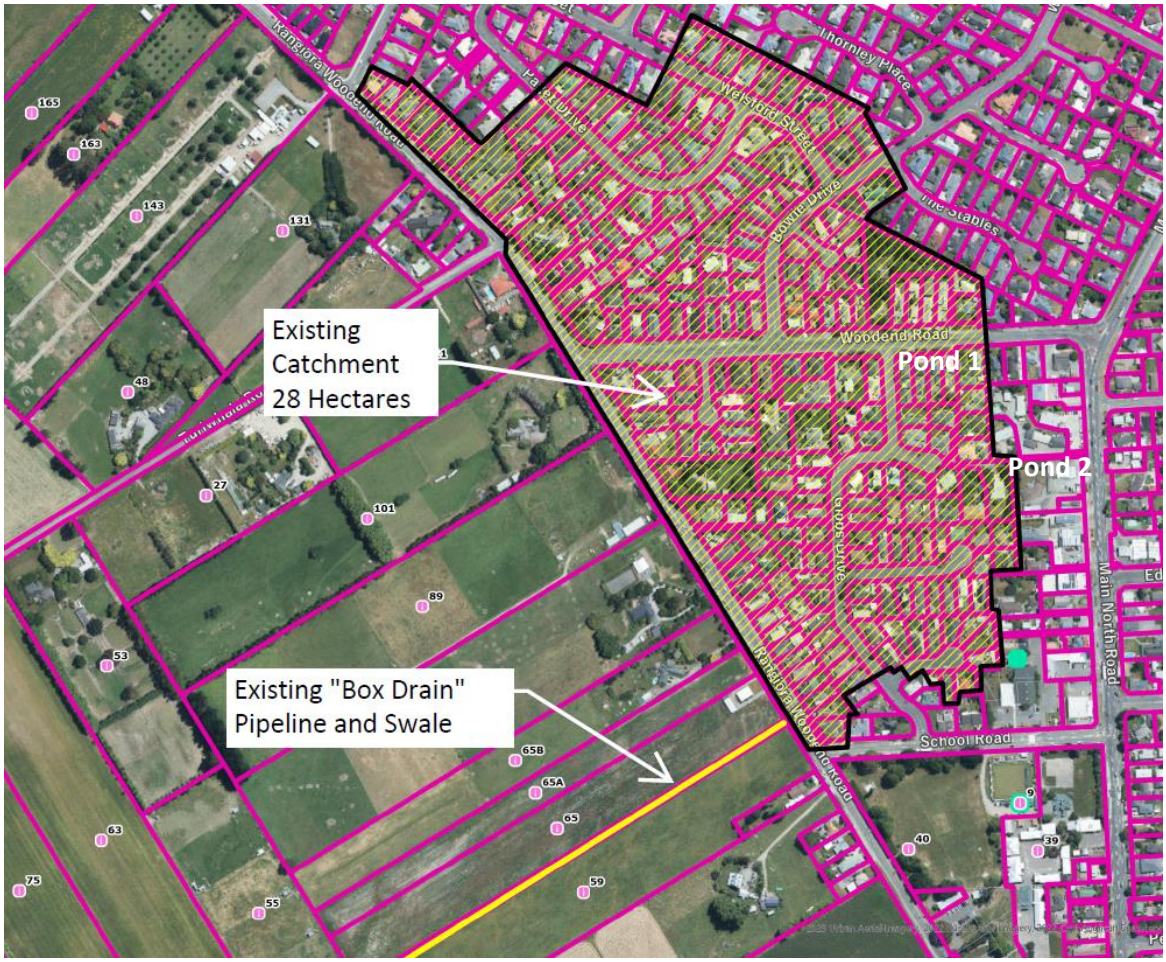


Figure 6 Upstream catchment area (Source: Council)

The Council's Woodend hydraulic model has been run for a number of different storm events however the modelled geometry needs some refinement to match the current situation. The modelled flow in the pipe entering the site in a 5-year 2 hour storm is approximately 520 l/s. The 50-year 2hr event has also been modelled with ponding shown on Gibbs Drive (Figure 7). Inspection of the hydraulic model results indicated a water level of 9.19 m NZVD (8.84 m LVD37) on the proposed site was when flooding was initiated by flows being higher than the kerb level on Gibbs Drive of approximately 10.0 m NZVD. The ~1m difference between this water level and the Gibbs Drive kerb level was a result of significant pipe losses shown in the model, especially at the last right angle turn as flow passes from the road corridor onto the site (Figure 8). Some model refinement and/or a different manhole design at this key location may result in lower head losses in the network. The modelled flow into the site when flooding is initiated is 370 l/s.

Model improvements to better reflect the existing geometry are recommended to validate the assumed maximum permissible upstream water level. For the purposes of this report a maximum permissible water level of 9.19m has been used being approximately half pipe depth in the 675mm pipe at the upstream end of the site. Future model refinements may need to alter this figure.

The water quality volume at the site based on the Waterways, Wetlands and Rainfall Guide (CCC 2015) methodology for the catchment[2] is approximately 4500 m^3 (see Appendix A.2 for calculations). It is assumed that contaminants in the stormwater generated off the catchment are typical of residential developed areas.

[2] A 'C value' of 0.65 was applied in the calculation for the upstream catchment as for residential land use in Table 5.3 of the Council Engineering Code of Practice (p14 Issue 4 QP-C814, WDC 2019)

Figure 7 50yr – hr Storm modelled flooding upstream of the site (Source: Council)

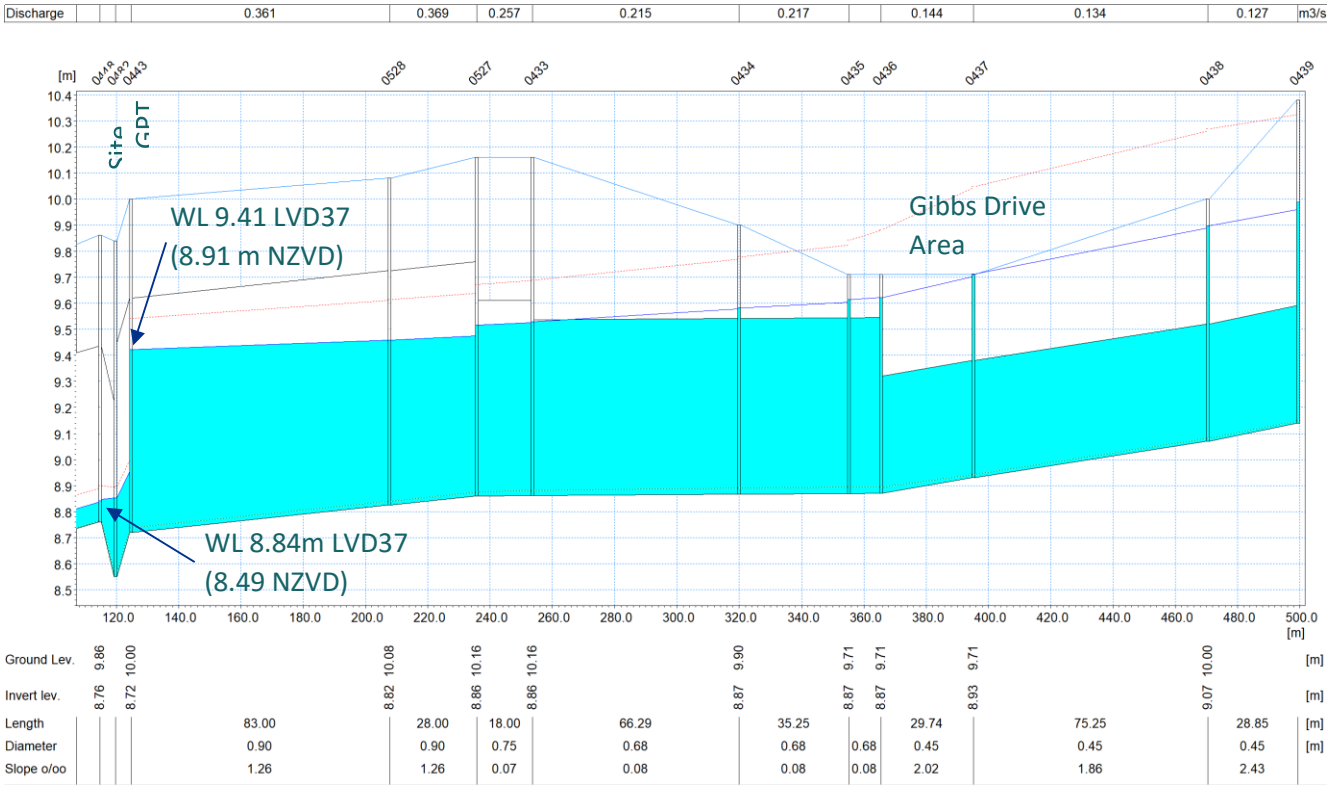


Figure 8 Hydraulic grade of the stormwater network at initiation of flooding on Gibbs Drive (levels in LVD37)

Three piezometers have been installed on site (Figure 9) on behalf of Council by Geotechnics (Oct 2022). The results show that groundwater at the site is shallow (Figure 10) and within 350mm of ground level at times in one bore. The groundwater levels have exceeded the logger upper recording limit for some of the period (as shown in as flat lines on the plot). The loggers have now been raised to collect a wider range of data.

The logs from the boreholes indicate that the site is generally silty and sandy materials in the top 1 m with finer material at depth in some locations (refer Appendix A.3 for bore logs). No geotechnical assessment of the site has been undertaken to inform the options assessment. It would be appropriate to do so at the next design stage to help understand the impacts of excavation on adjoining properties and informing appropriate batter slopes.

Figure 9 Piezometer and borehole locations (Source: Council)

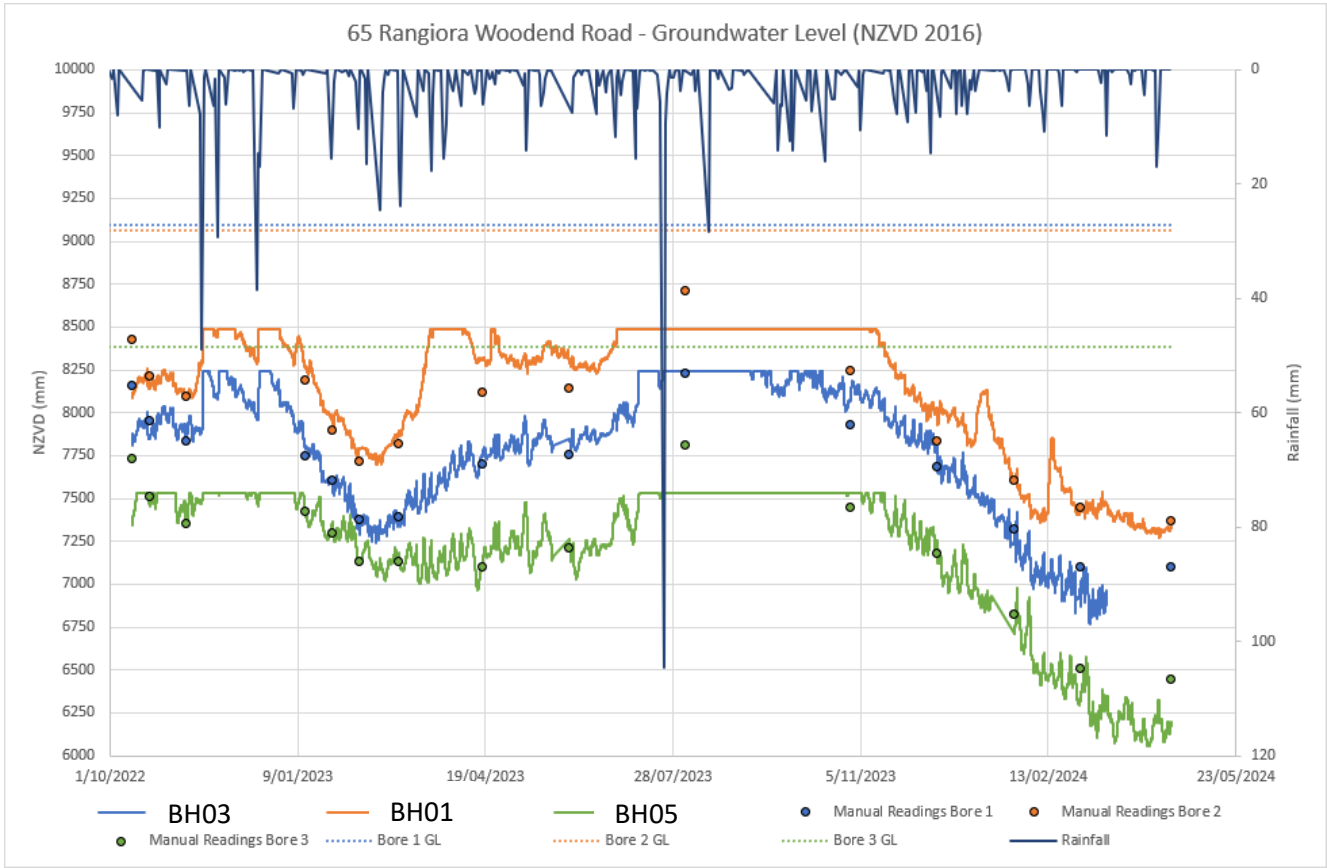


Figure 10 Recorded groundwater levels (Source: Council)

A preliminary site investigation has been undertaken on behalf of Council by WSP (Jan 2024). The report concluded that:

- No HAIL sites were identified at or near to the site.
- There is a potential for asbestos materials within the dwelling on the site.
- It is unlikely that soils on-site have the potential to impact human health.
- An accidental or unexpected contamination discovery protocol should be used during construction.

4 Options for stormwater management

During the preliminary options assessment a number of options were considered with three of these being continued on to the options assessment (Table 2).

Table 2 Options considered

Option	Progressed	Comment
Online first flush basin (ephemeral wetland) and wetland	Y	Reduced risk of groundwater interception
Offline first flush basin (ephemeral wetland) and wetland	Y	Reduced risk of groundwater interception
Gravity fed proprietary device	Y	Needs to be isolated from groundwater with lining / backflow prevention
Pump to proprietary device	N	Although an above ground proprietary device would occupy a small footprint, it would be expensive to operate, especially considering the carbon and monetary costs of pumping. Due to the availability of the land, the footprint driver this was not considered.
Wet Pond[4]	N	A wet pond was discounted due to the absence of base flow for flushing the device and the depth of excavation required to achieve a ponding depth for limitation of macrophytes
Dry first flush basin (with no further treatment)	N	A first flush basin in isolation would not achieve the desired water quality outcome or meet the requirements of the Engineering Code of Practice. A dry basin was discounted due to observed groundwater levels, which would regularly exceed the level of the wetland base. Note a sub-option of lining the base to prevent ingress was discounted due to costs, uncertainty and the ongoing risk.
Infiltration basin / soakage based system	N	Soakage / discharge to ground systems were discounted due to observed groundwater levels. The ground levels are regularly too high to allow soakage from the site
Do nothing	N	This will not meet the project objectives set by the PCG, and will also not meet expectations set by Tangata Whenua and the Council.

Three options for stormwater management on site have been carried though to the options assessment:

1. An online first flush basin (ephemeral wetland) and wetland
2. An offline first flush basin (ephemeral wetland) and wetland
3. A gravity fed proprietary filtration device

There are several assumptions for all options:

- The downstream pipe outlet from the site can freely discharge in the water quality event

[4] For the purposes of this assessment, a wet pond is defined as a continuous depth pond, with permanent pool of standing water, typically greater than 1.2m deep. There is therefore a risk of eutrophication during dryer months.

- The maximum water level upstream of the facility in the water quality event is 8.91m based on modelled water level backing up to Gibbs Drive (as discussed above)
- The hydraulic model accurately represents the losses in the upstream network
- The function of the gross pollutant trap (GPT) is not compromised by elevated tailwater levels
- Bunding and storage of water above ground is acceptable (i.e. the maximum upstream water level may be driven by ground levels rather than upstream pipe hydraulics)

Some ground improvement work may be necessary for any excavation near buildings.

All of the options will be challenged by high groundwater. From the Canterbury Maps website the bottom of kerb levels in Gibbs Drive are about 250mm below the ground level at the site at the road frontage or approximately the same level as ground at BH01. With groundwater levels at BH01 being dipped 250mm below surface level there is little depth between measured GWL and ground level upstream.

Calculations for all options are provided in Appendix A.2. Footprints and inverts for the options descriptions below are indicative only and for the preferred option, will be revisited using recently collected survey data at the next design stage.

4.1 Option 1 - Online first flush basin (ephemeral wetland) and wetland

This option consists of a first flush basin and wetland (Figure 11). The indicative area of the first flush basin and wetland are 11,000 m^2 and 14,000 m^2, respectively. If draining down of the upstream stormwater network is required the invert of the first flush basin will need to be 150 mm below the upstream invert of the 675 mm diameter pipe from the GPT (7.96 m). At this depth there will be a significant risk of groundwater ponding within the basin. The invert could be as high as 8.61 m if head losses were reduced in the manhole upstream of the GPT, surcharge of the pipe network was tolerable[5] and a shallow operating range of ~0.3 m was adopted.[6] The bottom of the wetland operating range will need to be approximately 100 m below the invert of the first flush basin. It could be as high as 8.5 m or as low as approximately 7.7 m, which is above the downstream pipe invert of 7.3 m and about peak recorded seasonal groundwater levels.[7] The indicative footprints shown in Figure 11 are based upon the Waterways, Wetlands and Drainage Guide (CCC) for the areas listed above. These will need to be refined at the next design stage based upon recent survey information.

Given the high groundwater levels observed at site the base of both elements will likely be wet for periods of time. As a result, the first flush basin base will need to be vegetated, include a low flow channel and be designed to accommodate periods of standing water and periods of groundwater inflow. Groundwater inflows into the system could occur if there are times when the groundwater gradient from top to bottom of the site exceeds the hydraulic grade through the facility (e.g. groundwater inflows into the first flush basin can still discharge via the outfall to Box Drain). The footprint of both elements may need to increase to allow for groundwater inflows and this will need to be assessed at the next design stage.

There is a risk of protracted groundwater ponding within the treatment system. As discussed above, it may be possible to raise the invert of the first flush basin to near to the GPT outlet level (approx. 8.9m NZVD) and reducing the operational range to 0.3m and increasing the footprint to approximately 16,000 m^2. The combined system footprint would then occupy the majority of the undeveloped site. A first flush basin operational range of 8.6 m to 8.9 would result in water standing in the upstream pipe network during the first flush basin operation. This could result in sediment settling in the pipe network and some loss in network capacity and maintenance burden. Subsoil drains around the first flush basin could help reduce groundwater levels within the basin.

An upper operational water level of 8.9 m is likely to be about ground level at the downstream end of the first flush basin. A low bund would be needed to accommodate this. Including some freeboard in the bund would be appropriate along with an overflow weir to spill to the wetland.

[5] This would impact on the effectiveness of the GPT. It may be possible to include a small opening or a gate in the bypass weir to allow draining down of the network, however a small opening would allow some flow to bypass the treatment system and would be prone to blockage.

[6] The minimum operating depth will be influenced by the area required for the basin with the area limited by the location of the existing dwelling on the site, which is to remain.

[7] The peak groundwater levels recorded at the site may not be representative of historic highs or extreme values.

Further reduction in upstream head losses could also be investigated to allow a higher top operating water level to reduce the overall system footprint.

An online system does not have a flood flow bypass. All flow from the upstream network is passed through the treatment facility after the gross pollutant trap. This presents a risk of resuspending contaminants and flushing out dirtier water through the system that was captured during the first flush. The benefit is a slightly reduced total footprint, as there is no room required for the bypass system.

Figure 11 Indicative online system layout

4.2 Option 2 - Offline first flush basin (ephemeral wetland) and wetland

An offline system reduces the risk of washing the most contaminated water through the treatment system during a high flow event. This would rely on an overflow downstream of the GPT back into the existing pipe and swale system to allow flood flows to bypass the treatment system once it was full. The disadvantage of this is that the head loss through the bypass needs to be accounted for in setting the top operational water level of the first flush basin. This may result in a larger first flush basin footprint.

The overall system footprint (Figure 12) is also increased due to the need to offset the first flush basin and wetland from the existing pipe and swale. Careful consideration of the overall system footprint within the site is required to avoid the existing dwelling, especially if the first flush basin invert were raised to 6 m to avoid high groundwater. In this scenario, some compromise in treatment outcomes may need to be accepted. As with Option 1, some balancing of risk will be needed in the next stage of design to avoid demolition of the existing dwelling and to maximise the utility of the site.

If this option is preferred, then modification to the existing pipe and swale system to reduce upstream flood risk could be considered at the concept design phase. Any options for this would need to be closely considered as to avoid or mitigate any increase in flood risk downstream.

Figure 12 Indicative offline system layout

4.3 Option 3 - Gravity fed proprietary filtration device

For the purposes of this evaluation a Stormwater 360 Filterra Bioscape[8] has been considered. A Bioscape has a very small relative footprint to a traditional, land-based treatment system due to a high percolation rate through the media (2,500 mm/hr). It generally consists of a proprietary filtration media overlaid with a standard bark mulch and with some vegetative cover. The Filterra media is composed of aggregates and organic material and therefore utilises biological processes to treat the contaminants of concern. These devices can be built within in-situ soils and without a concrete vault but given high groundwater at the site, it will likely need to be lined.

Design of proprietary devices is usually undertaken by the supplier. For the purposes of this evaluation it has been assumed that there will need to be:

- 100mm of non-floating mulch
- 550mm of Filterra Bioscape filter media[9]
- 250mm of aggregate and underdrain

A ponding depth of 150mm above the mulch is typical for these types of devices. There is a need to keep the filter media above static water level to avoid algae growing, which could block the media. This results in a depth of 800mm above tailwater level. The existing pipe invert about the filter is at 7.9 m. Given the upstream peak water level of 8.9 m and a system dry depth of 0.8m leaves only 200 mm head loss through the remaining system, including inlet weirs, pipework between cells, discharge drainage and depth of flow at outfall. It will be very challenging to design a system to this constraint. There is also a risk of high groundwater about the device, meaning that lining of the device may be necessary.

Further design of the filter media may reduce the media thickness allowing some flexibility in the hydraulic design of the remaining system. Some surcharge of the upstream network will be required. Further investigation into the impact of this on the existing GPT is required if this option is to be pursued.

The required media area is approximately 350m^2 based upon a design flow rate of approximately 240 l/s. Four cells of approximately 10 m x 20 m would meet the required treatment area (Figure 13).

[8] https://www.stormwater360.co.nz/products/green-infrastructure/bioretention/prod/filterra-bioscape

[9] The filter media depth can be refined through the design process, with a larger footprint and a shallower media depth. This could limit the upstream hydraulic impacts of the device or allow the invert to be raised above groundwater levels.

Figure 13 Indicative proprietary device layout

There may be other proprietary options available that better meet the constraints of the site. This would be considered at the next stage of design if this option is preferred. Alternatively, pumping may be required, in order to overcome the very narrow operating envelope between the high groundwater and the upstream network constraints. Again, this would be further investigated if the option is preferred.

5 Options evaluation

The three options described in Table 2 above went through a two-step evaluation process. Firstly, the options underwent a limitations analysis (Table 3). Secondly, the feasible options were evaluated against the objectives set out for the project (Table 4). A traffic light approach was applied to the evaluation and even weighting was applied to all criteria.

5.1 Limitations Analysis

Table 3 Limitations analysis

Limitation	Option 1 – Online First Flush Basin and Wetland	Option 2 – Offline First Flush Basin and Wetland	Option 3 – Gravity Fed Proprietary Filtration Device
Desire to reduce operational costs	First flush basin will require occasional removal of accumulated sediments. Low flow channel in wetland may also require removal of accumulated sediments.	First flush basin will require occasional removal of accumulated sediments. Low flow channel in wetland may also require removal of accumulated sediments. Retained pipe for bypass flows will require periodic sediment removal.	Top layer of bark mulch and plants will require replacement every 6 – 12 months. Periodic flushing of the device may be required to prevent algal growth. Lack of operational head likely to lead to pumping resulting in significant lifetime costs and carbon usage
Option needs to reduce upstream flooding on Gibbs Drive	Opportunity to provide some improved drainage and reduced tailwater levels for network from Gibbs Drive		No material change in flooding as no additional storage provided. Space on remaining site could be used for flood storage.
High groundwater levels present across the site	Uncertainty in groundwater monitoring data indicates a possibility that the FFB and Wetland may intercept groundwater during construction and that lower edge may need bunding. If it is desired to fully drain the network u/s in Gibbs Drive, the FFB will likely need to be lowered, increasing the risk of standing water in the base for prolonged periods.		The standard dimensions of the device are likely to result in groundwater interception and therefore lining may be required. Likely to lead to surcharging of the upstream network, leading to sedimentation
Desire to retain dwelling on site and subdivide	To ensure sufficient retention of flood volume and prevent washing through of contaminated sediment FFB will likely need to be 0.5m deep to fit the site footprint, reducing suitable plants.	Due to reduction in the overall site area from the retention of the existing pipe and swale infrastructure, the first FFB will likely need to be 0.5m deep to fit the site footprint, reducing suitable plants.	The small footprint of this option does not impact on the desire to retain and subdivide the existing dwelling.
Significant headloss u/s GPT	Having multiple inflow locations into system would allow for reduced head losses in the manhole upstream of the GPT but some catchment would bypass the GPT. Alternatively work to reduce head losses in the manhole could also be undertaken		

The limitations analysis shows that Option 3 – Gravity Fed Proprietary Filtration Device scores poorly due to operational costs and risks posed by high groundwater at the site. It is not recommended to progress Option 3 further. Options 1 and 2 have been considered in the values assessment.

5.2 Values Evaluation

The two options that passed the limitations analysis were considered against the project objectives (Table 4).

A cost evaluation criterion was included in the second stage of the assessment. Costs estimates have not been developed for the individual options, however judgement based upon past studies has been used to score the options.

There has been no evaluation of 'consentability' of the options. A number of consents / approvals will be needed to progress the project, these are likely to include: earthworks consents, groundwater take consents, archaeological authorities, and potentially discharge consents. Options 1 and 2 may have barriers to consent given the potential for groundwater take and significantly greater land disturbance. Potential mitigations will need to be explored during the concept design phase.

Overall, Option 2 is preferred due to the known treatment outcomes, alignment with a range of values and best practice supporting offline systems. The proprietary device presents some opportunities for a range of uses for the remaining land which are not offered by the land based treatment options (Options 1 and 2).

In scoring the cost attribute it has been assumed that it will be possible to subdivide the section and resell the dwelling occupying the front of the site.

For Option 2, if the invert of the first flush basin were raised to reduce risk of groundwater ponding then demolition of the dwelling may be necessary to achieve a similar water quality outcome to other options. If this were to be the case then this attribute would be marked in 'red'.

Table 4 Objectives evaluation

Value	Objective	Option 1 – Online first flush basin and wetland	Option 2 – Offline first flush basin and wetland
Native Biodiversity	Restore the Whenua utilising the black maps as a guide	The black maps indicate dryer, grassland vegetative cover at the site. These options include a wetland and an ephemeral wetland as a first flush basin. Waterbody / wetland landforms are indicative of black maps data near to but not at the site.	
	Return parts of site to a forested wetland over the long term (50+ yrs)	Both options will have a large wetland footprint suitable for planting larger species on higher slopes.	
	Seek fish egress, but not ingress	It will not be possible to entirely exclude fish, particularly tuna (eels), from the site. Ongoing fish capture and removal may be required to isolate fauna from the risk posed by accumulated contaminants.	
	Promote bird species recovery	The wetland land forms and batter slopes allow a range of possible vegetative cover which may help support a range of different bird species.	
Customary use	Make the site available for Ngā Tūāhuriri whanau to harvest harakeke (flax) and other plants (where appropriate)	The wetland land forms and batter slopes allow a range of possible vegetative cover which can support a range of different species for harvest.	
	Limit recreational use by wider public	All options can be designed to minimise recreational use by not having paths, seats or signage. Dense planting or fencing of the street frontage can also limit public ingress.	
Water Management	Improve downstream water quality	Online systems risk diluting of the first flush with flushing through in larger events.	Offline treatment provides the best isolation and treatment of the first flush.
	Give effect to Te Mana o te Wai	Potential for contaminants resuspending and flushing through in larger events	Capture of first flush discharge and attenuation of flood flows will protect the health and well-being of downstream freshwater sources for the benefit of present and future generations.
	Attenuate flood flows, where possible, and maintain drainage	It may be possible to design the system to back flood the wetland to provide some flood attenuation in large events. The system will also provide some attenuation of small storm flows.	
	Allow for future flows	Both options will allow some direct connection of adjoining properties to the first flush basin.	
Maintenance	Enable maintenance through the design	This option will have the most obvious flow path and will be entirely at surface.	Retaining the pipe and swale system will require some ongoing maintenance which may not be apparent from the surface.
Cost	Limit overall project costs	This option will abandon existing infrastructure on the site resulting in loss of book value. It has similar ongoing costs to other treatment facilities in the district.	This option maximises use of existing infrastructure and has similar ongoing costs to other treatment facilities in the district but there is a risk of demolition / removal of the existing dwelling on site being required.

6 Recommendations

Based upon the assessment against the project objectives it is recommended that Option 2 (an offline first flush basin and wetland) be progressed to concept design. This option does have risk of degraded function during high groundwater levels and relies on the validity of hydraulic model for maximum operating water level. These risks may be reduced through refinement to the hydraulic model, upstream network improvements, and further groundwater data and analysis. These will be necessary to understand any remaining risk, however this data refinement does not influence the option selection rather feasibility of the site as a whole to provide the desired utility without pumping. If the assumptions within this report are found incorrect then Council may need to revisit the matter of pumping.

Further design development of Option 2 is required to maximise the utility of the undeveloped site to meet the project objectives. Altering the depth of the FFB to reduce groundwater risk will increase risk of sedimentation in the upstream network but will reduce the risk of reduced treatment outcomes and poor maintenance outcomes. The available undeveloped area will limit the extent that the first flush depth can be reduced as Council has given direction that the existing dwelling should remain.

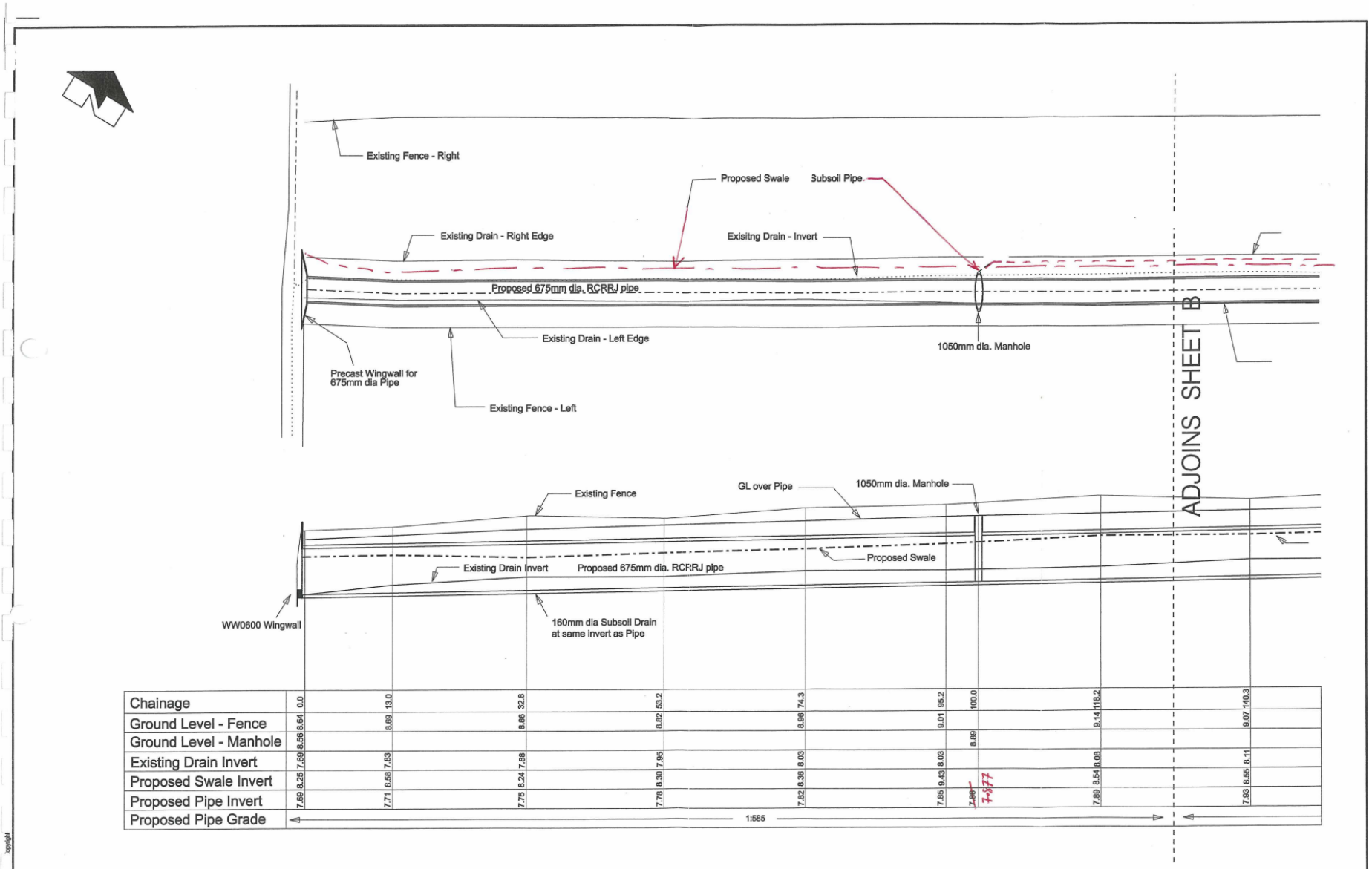
A decision from the PCG will be required to support this recommendation.

Further evaluation of the preferred option will be required during the concept design stage, including:

- Geotechnical assessment
- Hydrogeological assessment
- Sizing of inlet and outlet structures
- Hydraulic model updates and modelling of the impacts of the preferred option
- Undertaking a cultural values assessment
- Topographical site survey
- A consenting assessment

The findings of the above work could alter the footprint of the individual elements within the facility. For example, high groundwater inflows will require additional volume in the first flush basin and wetland.

A.1 BOX DRAIN AS BUILT PLANS



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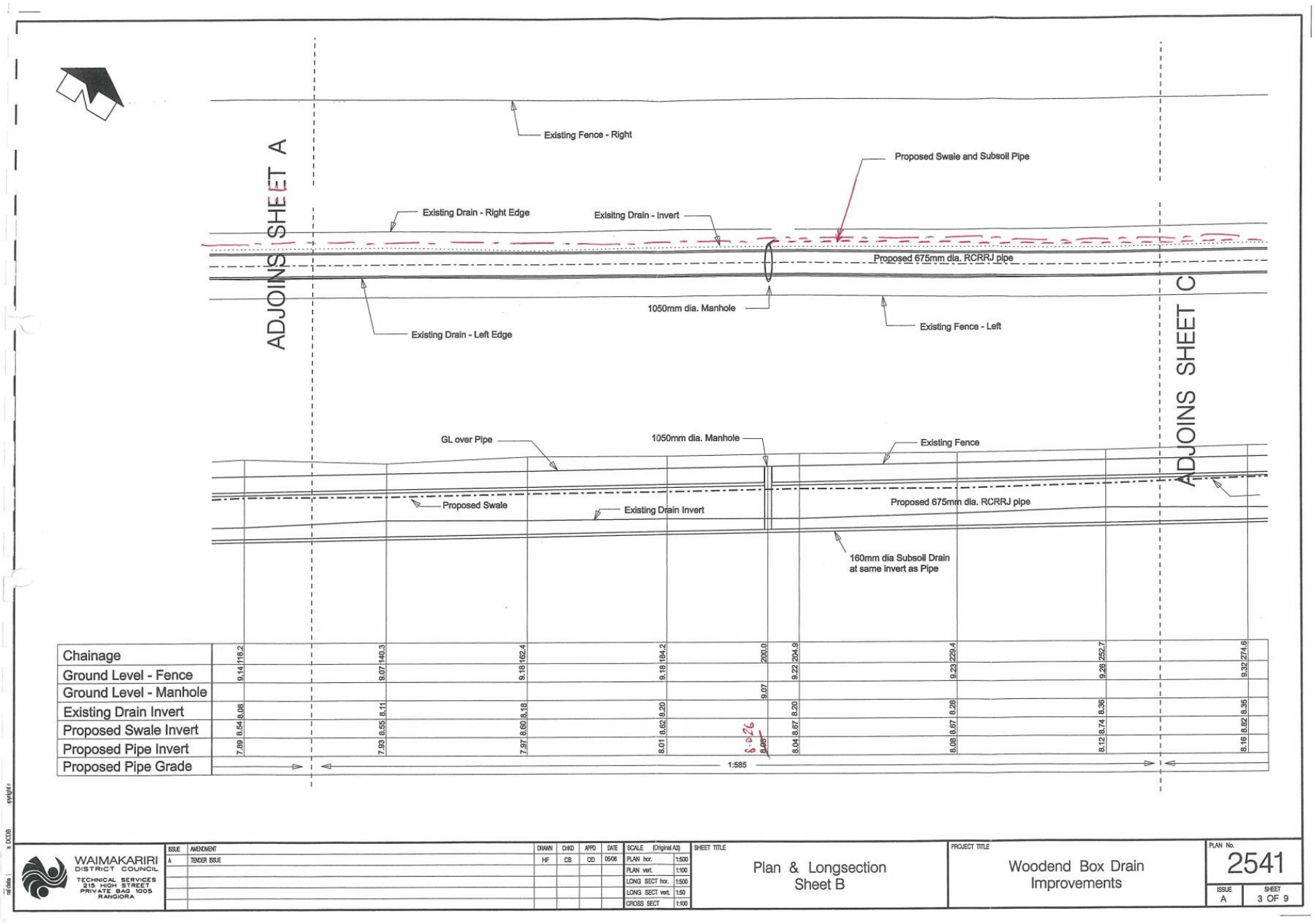
PROJECT TITLE	PLAN No.	
Woodend Box Drain Improvements	2541	
	ISSUE: A	SHEET: 2 OF 9



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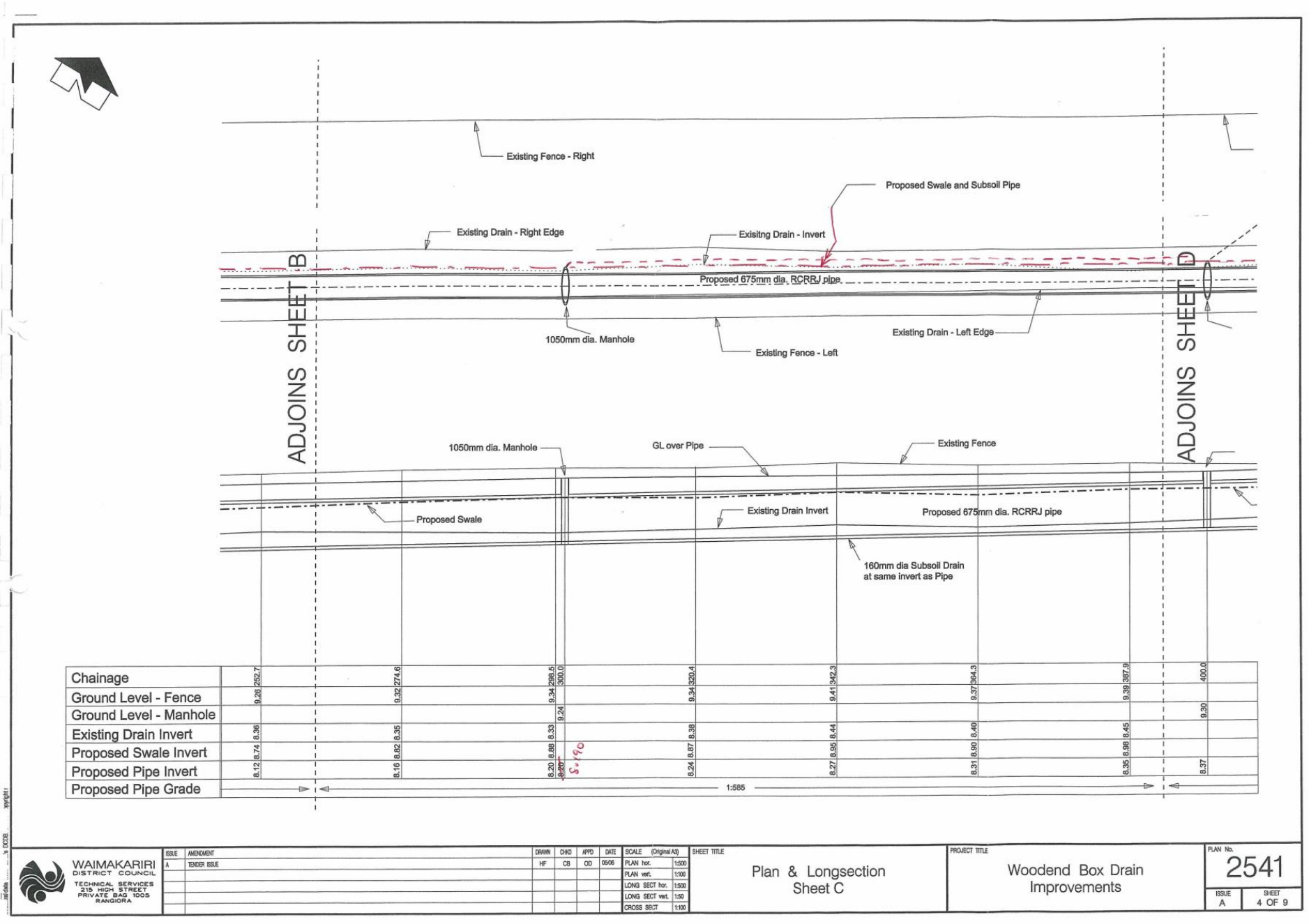
Existing Fence - Right
Proposed Swale and Subsoil Pipe
Existing Drain - Right Edge
Exisitng Drain - Invert
ADJOINS SHEET B
Proposed 675mm dia. RCRRJ pipe
1050mm dia. Manhole
Existing Drain - Left Edge
Existing Fence - Left
ADJOINS SHEET D
1050mm dia. Manhole
GL over Pipe
Existing Fence
Proposed Swale
Existing Drain Invert
Proposed 675mm dia. RCRRJ pipe
160mm dia Subsoil Drain at same invert as Pipe
Chainage
Ground Level - Fence
Ground Level - Manhole
Existing Drain Invert
Proposed Swale Invert
Proposed Pipe Invert
Proposed Pipe Grade
252.7
274.6
298.5
300.0
320.4
342.3
364.3
387.9
400.0
9.28
9.32
9.34
9.34
9.41
9.37
9.39
9.24
9.30
8.36
8.35
8.33
8.38
8.44
8.40
8.45
8.74
8.82
8.88
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8.95
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215 HIGH STREET
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PROJECT TITLE
Woodend Box Drain
Improvements
PLAN No.
2541
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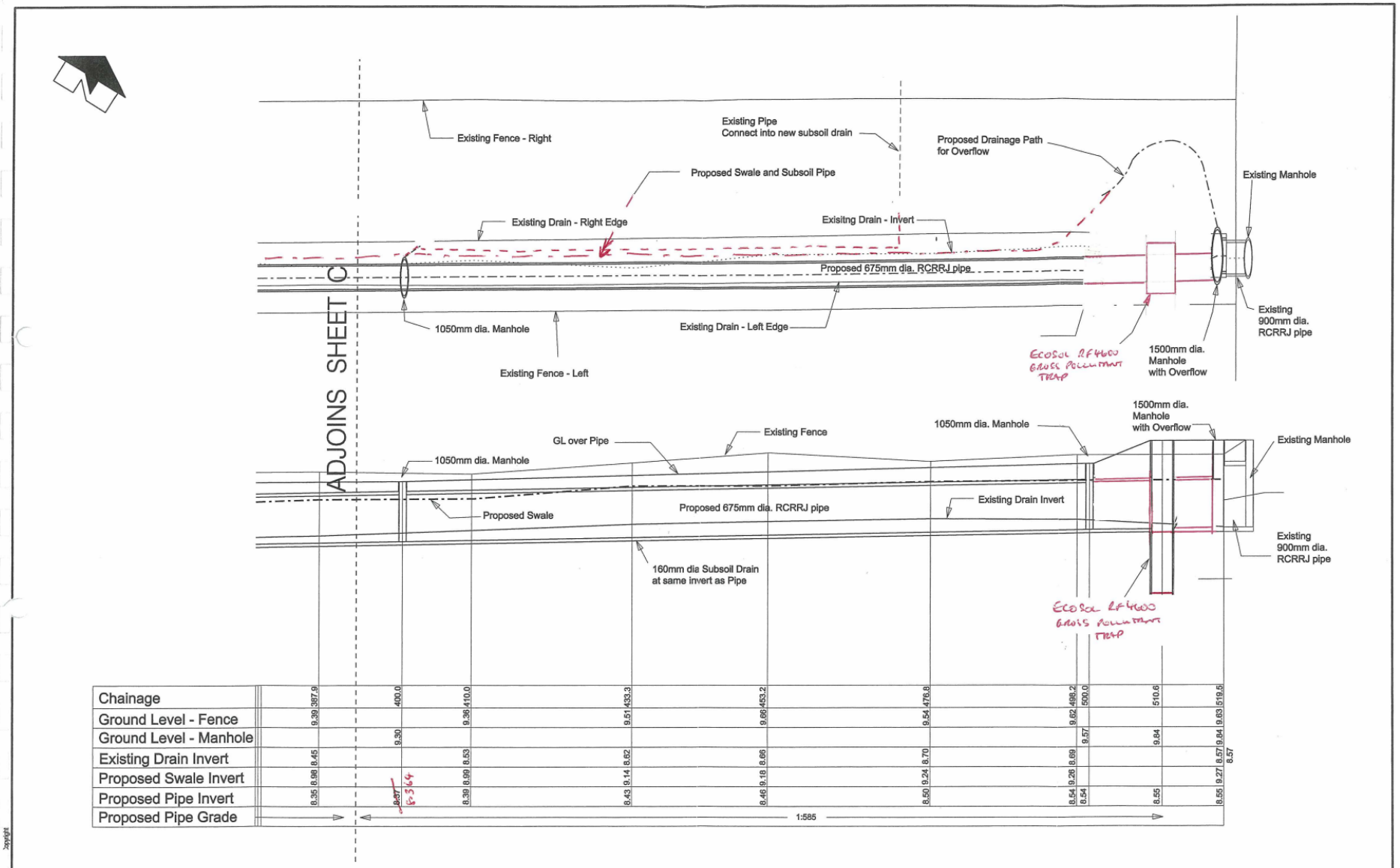

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PROJECT TITLE	PLAN No.	
Woodend Box Drain Improvements	2541	
	ISSUE	SHEET
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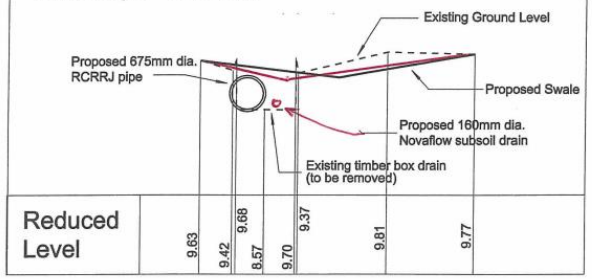
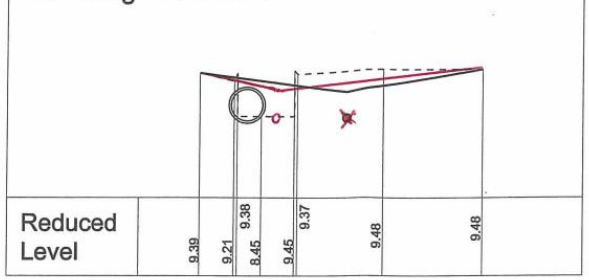
Chainage - 519.5m



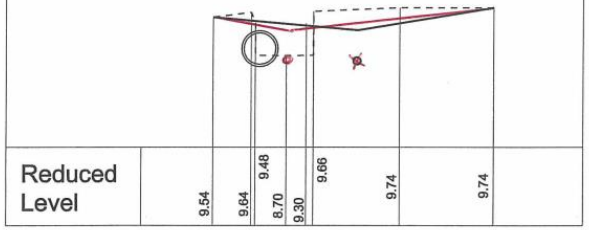
Reduced Level							
	9.63	9.42	9.68	8.57	9.70	9.37	9.81	9.77

Chainage - 387.3m



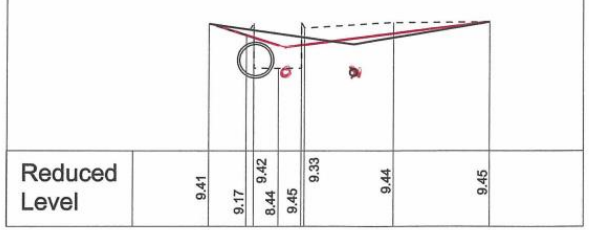
Reduced Level							
	9.39	9.21	9.38	8.45	9.45	9.37	9.48	9.48

Chainage - 476.8m



Reduced Level							
	9.54	9.64	9.48	8.70	9.30	9.66	9.74	9.74

Chainage - 342.3m



Reduced Level							
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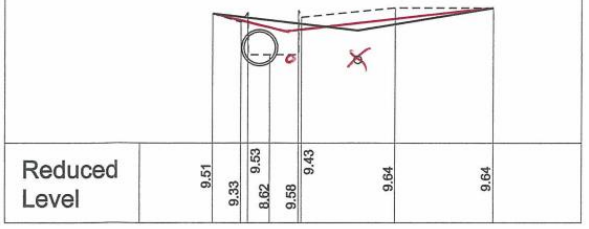
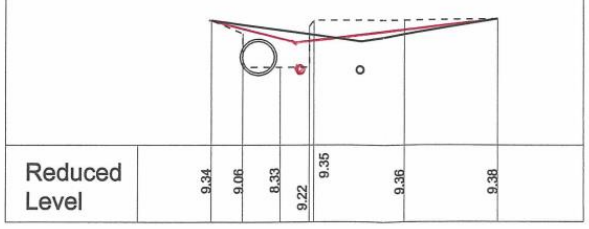
Chainage - 433.3m



Reduced Level							
	9.51	9.33	9.53	8.62	9.58	9.43	9.64	9.64

Chainage - 298.5m



Reduced Level							
	9.34	9.06	8.33	9.22	9.35	9.36	9.38

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ISSUE	AMENDMENT	DRAWN	CHKD	APPD	DATE
A	TENDER ISSUE	HF	CB	DD	0508

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PROJECT TITLE: Woodend Box Drain

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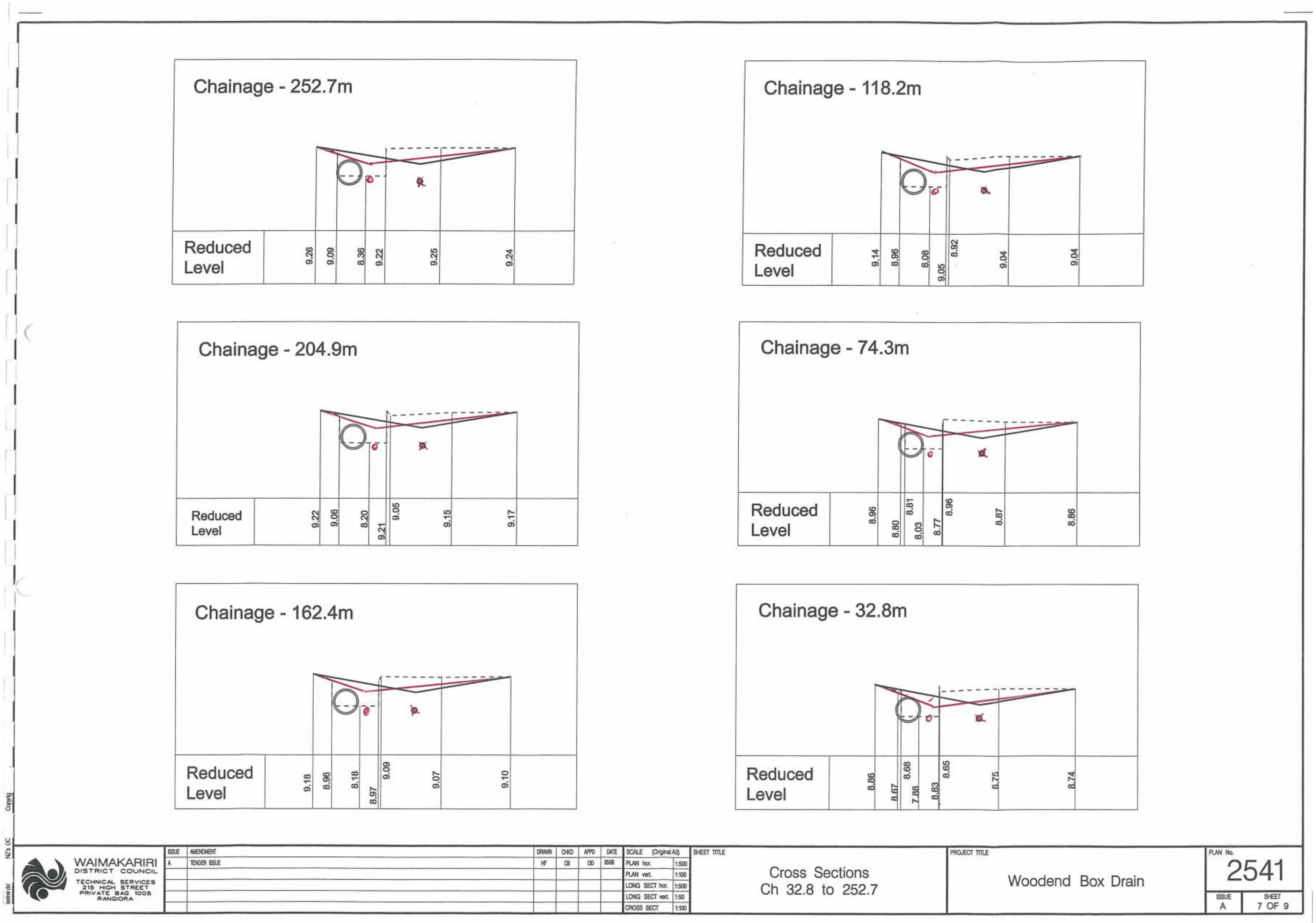

Chainage - 252.7m
Reduced Level
9.26 9.09 8.36 9.22 9.25 9.24
Chainage - 118.2m
Reduced Level
9.14 8.96 8.08 9.05 8.92 9.04 9.04
Chainage - 204.9m
Reduced Level
9.22 9.06 8.20 9.21 9.05 9.15 9.17
Chainage - 74.3m
Reduced Level
8.96 8.80 8.81 8.03 8.77 8.96 8.87 8.86
Chainage - 162.4m
Reduced Level
9.18 8.96 8.18 8.97 9.09 9.07 9.10
Chainage - 32.8m
Reduced Level
8.86 8.67 8.68 7.88 8.83 8.65 8.75 8.74
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215 HIGH STREET
PRIVATE BAG 1005
RANGIORA
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Ch 32.8 to 252.7
PROJECT TITLE
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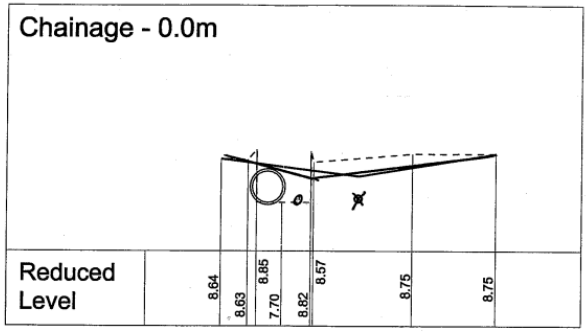

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PROJECT TITLE: Woodend Box Drain

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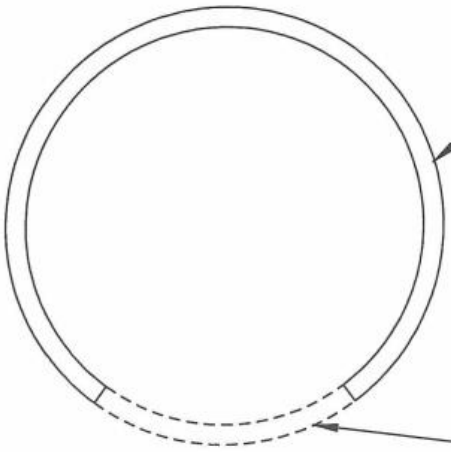
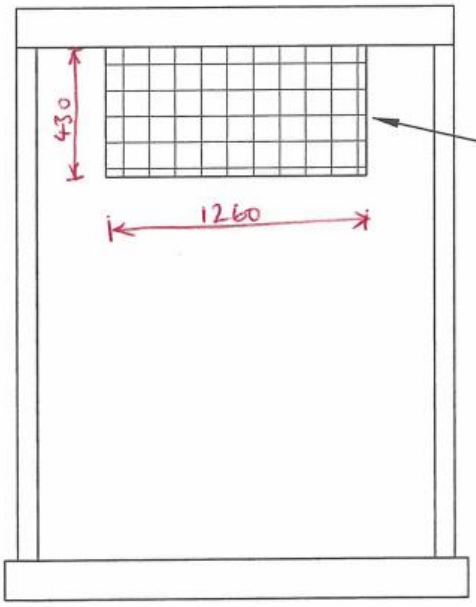


Standard 1500mm dia Manhole

Overflow Slot

PLAN



Overflow Slot
~~1.0m x 0.5m~~ opening
with 100x100x4
Galvanised Mesh Cover

ELEVATION

WAIMAKARIRI DISTRICT COUNCIL TECHNICAL SERVICES 215 HIGH STREET PRIVATE BAG 1005 RANGIORA	SCALE 1:XXXX (A4) PLAN hor. PLAN vert. LONG SECT hor. LONG SECT vert. CROSS SECT	SHEET TITLE 1500 Manhole with Overflow	PROJECT TITLE Woodend Box Drain	PLAN No. 2541 ISSUE A SHEET 9 OF 9

A.2 CALCULATIONS

Parameter	Value
Upstream catchment total area (ha)	28
Impervious % (as per table 5.3 WDC engineering code of practice for residential development)	0.65
Impervious area (ha)	18.2
WQV (m^3) (from 25mm WWDG rainfall depth)	4550
Proprietary device sizing rainfall intensity (CCC) (mm/hr)	5
Runoff coefficient for grade	0.95
Proprietary device flow rate (l/s)	240
Cross-check	
Site 2-year ARI 24-hour rainfall depth (mm) from HIRDS v4 RCP 8.5	53.6
1/3 2yr 24hr rainfall (mm) *Apply WWDG 25mm depth as conservative*	17.9

First flush basin	Indicative sizing online	Indicative sizing offline
Volume (m^3)*	4550	4550
Depth (m)	0.5	0.5
Side slopes	1 in 4	1 in 4
Max u/s WL (m)	8.91	8.81**
Invert (m)	8.41	8.31
Section width (m)	93	88
Max width (m) (accounting for access and a low bund)	73	68
Adjoining ground level (m)***	9.1	9.1
Side slope width (m)	2.8	3.2
Max base width (m)	67	62
Water Level Width	71	66
x-sec area (m^2)	36	33
Length (m)	127	139
Area (m^2)	9100	9100
Area adjustment for vegetation	1.1	1.1
Adjusted wetted area (m^2)	10,010	10,010
First flush release rate (m^3/hr)	47	47

*Groundwater inflows have not been assessed at this stage. Additional storage may be necessary should groundwater inflows be high.

**The level has been dropped by 100mm to allow for flow over the bypass weir, or otherwise compensated for by reducing head loss in the upstream pipe network. This will need to be confirmed during concept design

***GL taken from GLs at piezometer locations

Wetland	Indicative sizing online	Indicative sizing offline
Flow rate (m^3/day)*	1,138	1,138
Wetted area (ha)	1.21	1.21
Max width (m) (accounting for access)	73	68
Adjoining ground level (m)**	8.41	8.31
Average water depth (m)	0.25	0.25
Peak water level (m)	8.16	8.06
Wetland average invert (m)	8.16	8.06
Side slope width (m)	2.36	2.76
Max base width (m)	68	62
Wetland minimum length (m)	178	194
Detention volume above wetland operation and below FFB peak WL (m^3)	6,067	6,067
Total detention volume (m^3) FF + WL	10,617	10,617
Approximate total footprint (WL+FFB) + buffer (m^2) excl. dry cut depth	25000	25000

*The wetland may need to increase in size during concept design to allow for groundwater inflows. If no allowance is made then retention time in the wetland will drop with reduction in treatment effectiveness.

**Approximated from GLs at piezometer locations

Bioretention device sizing:

Proprietary device (Filterra Bioscape)	Indicative sizing
Flow rate (l/s)	240
Flow rate (m^3/hr)	864
Design percolation rate (m/hr)	2.5
Media area (m^2)	346
Side slopes*	1 in 4
Max u/s WL (m)	8.91
System dry depth (m)	0.8
Invert (m)	8.11
Max width (m) **	20
Adjoining ground level (m)***	9.8
Side slope width (m)	7
Max base width (m)	6.5
Length (m)	13
Number of cells	4

*Batter slope beneath media can be steeper based upon geotechnical input. 1:4 batter above media for easy mowing. Steeper slopes may be possible with planting.

**Device suppliers may specify smaller cells to enable maintenance access and uniform flow distribution over media surface. They are typically in the order of 10 m W x 20 m L, although this can vary.

***Approximated from Canterbury Maps long section (Figure 5).

A.3 GEOTECHNICAL FIELD INVESTIGATION LOGS

65 – 65A Rangiora Woodend Road – 28th & 29th September 2022

Locations are indicative only

GEOTECHNICS

45A Parkhouse Road
Wigram
Christchurch

Site	65 – 65A Rangiora Woodend Road	Our Ref	1017455.0001.0.0/Rep01	Drawn By	JEBR	Date	10/10/22
Location	Woodend, Canterbury	Customer Ref	P1042617	Checked By	CXPG	Date	10/10/22
Project	G CH WDC 65 Rangiora Woodend	Lab Ref	N/A	Scale	Not to Scale		

N

Aerial photograph(s) sourced from Google (Copyright 2022).

GEOTECHNICS

BOREHOLE LOG

BOREHOLE No.: **BH01**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 1 OF 2

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.660277159787 -43.3244337981349	DRILL TYPE: Dando Terrier Rig	HOLE STARTED: 28/09/2022 HOLE FINISHED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: PR	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL									ENGINEERING DESCRIPTION						
GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION	FLUID LOSS (%)	WATER	CORE RECOVERY (%)	METHOD	CASING	TESTS	SAMPLES	RL (m) / DEPTH (m)	GRAPHIC LOG	MOISTURE CONDITION / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	SHEAR STRENGTH (kPa)	COMPRESSIVE STRENGTH (MPa)	DEFECT SPACING (cm)	Description and Additional Observations
		28/09/2022	100	PR	128mm PQ			0.5		M	St				*0.00m:* Sandy SILT, trace rootlets; dark brown. Stiff, moist, non-plastic; sand, fine.
															0.25m: Silty SAND; greyish brown with orange motting. Moist, well graded; sand, fine to medium.
										W	F				*0.55m:* Sandy SILT; brownish grey with orange mottling. Firm, wet, non-plastic; sand, fine.
								10 1.0		S					*0.90 - 1.00m:* Greyish brownish orange. *1.00m:* Brownish grey with orange mottling. Saturated.
			100	PR	128mm PQ			1.5			F				*1.30m:* Silty SAND; greyish brown with orange motting. Saturated, well graded; sand, fine to medium.
											F				*1.55m:* SILT, minor sand, trace clay; brown with orange mottling. Firm, saturated, non-plastic; sand, fine.
											S				*1.65m:* SAND, some silt; brownish orange and bluish grey. Saturated, well graded; sand, fine to coarse.
								9 2.0							*1.70m:* Clayey SILT, trace rootlets; bluish grey. Soft, saturated, low plasticity.
															2.00m: Sandy SILT; bluish grey. Soft, saturated, non-plastic; sand, fine to medium.
			100	PR	128mm PQ			2.5							*2.10m:* Silty SAND; bluish grey. Saturated, well graded; sand, fine to coarse.
											F				*2.50m:* Sandy SILT; bluish grey. Firm, saturated, non-plastic; sand, fine to medium.
											S				*2.75m:* SAND, some silt; bluish grey. Saturated, well graded; sand, fine to coarse.
															2.80m: Clayey SILT, trace organics; grey. Soft, saturated, low plasticity; organics, rootlets and fibrous.

COMMENTS: 50mm Piezometer pipe installed at BH01 location to approximately 4.0m.

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:02 am - Produced with Core-GS by GeRoc

BOREHOLE No.: **BH01**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 2 OF 2

GEOTECHNICS

BOREHOLE LOG

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.660277159787 -43.3244337981349	DRILL TYPE: Dando Terrier Rig	HOLE STARTED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: PR	HOLE FINISHED: 28/09/2022
			DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL | ENGINEERING DESCRIPTION

Depth (m)	RL (m)	Core recovery (%)	Method	Casing	Moisture condition	Strength/density	Description and Additional Observations
2.80 – 3.20		100	PR	128mm PQ			[CONT] *2.80m:* Clayey SILT, trace organics; grey. Soft, saturated, low plasticity; organics, rootlets and fibrous.
3.20 – 3.40					S	S	*3.20m:* SILT, some sand, trace organics and clay; grey. Soft, saturated, non-plastic; sand, fine; organics, rootlets and fibrous.
3.40 – 4.00							*3.40m:* Clayey SILT, trace organics; dark brownish grey. Soft, saturated, low plasticity; organics, rootlets and fibrous. *3.55 - 3.65m:* Dark greyish brown. *3.65 - 3.90m:* Grey. Medium plasticity. *3.90 - 4.00m:* Brownish grey.
4.0	7						4m: Target depth
4.5							
5.0	6						
5.5							

Column headings: GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION; FLUID LOSS (%); WATER; CORE RECOVERY (%); METHOD; CASING; TESTS; SAMPLES; RL (m); DEPTH (m); GRAPHIC LOG; MOISTURE CONDITION / WEATHERING; STRENGTH/DENSITY CLASSIFICATION; SHEAR STRENGTH (kPa); COMPRESSIVE STRENGTH (MPa); DEFECT SPACING (cm); Description and Additional Observations

COMMENTS: 50mm Piezometer pipe installed at BH01 location to approximately 4.0m.

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:02 am - Produced with Core-GS by GeRoc

BOREHOLE No.: **BH02**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 1 OF 2

GEOTECHNICS

BOREHOLE LOG

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.659803433306 -43.3239347385078	DRILL TYPE: 65mm Hand Auger	HOLE STARTED: 28/09/2022 HOLE FINISHED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: HA	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL — ENGINEERING DESCRIPTION

Columns: GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION; FLUID LOSS (%); WATER; CORE RECOVERY (%); METHOD; CASING; TESTS; SAMPLES; RL (m); DEPTH (m); GRAPHIC LOG; MOISTURE CONDITION / WEATHERING; STRENGTH/DENSITY CLASSIFICATION; SHEAR STRENGTH (kPa); COMPRESSIVE STRENGTH (MPa); DEFECT SPACING (cm); Description and Additional Observations

Water: 28/09/2022 (at approx. 0.80m)

Depth (m)	RL (m)	Core Recovery (%)	Method	Moisture	Strength/Density	Description and Additional Observations
0.00		100	HA	M	F	*0.00m:* Sandy SILT, trace rootlets; dark brown. Firm, moist, non-plastic; sand, fine.
0.30		100	HA	M-W	S	*0.30m:* SILT, some sand; brown with orange mottling. Soft, moist to wet, non-plastic; sand, fine to medium.
0.80		100	HA	W	S	*0.80m:* Sandy SILT; bluish grey with orange mottling. Soft, wet, non-plastic; sand, fine to medium.
1.00	10	100	HA	S	S	*1.00m:* Saturated.
1.40		100	HA	S	S	*1.40m:* Clayey SILT, trace sand; greyish brown with orange mottling. Soft, saturated, low plasticity; sand, fine. *1.80 - 1.90m:* Bluish grey with orange mottling. *1.90 - 2.10m:* Trace rootlets; bluish grey.
2.00	9					
2.10		25	HA	S		*2.10m:* Silty SAND; bluish grey. Saturated, well graded; sand, fine to medium.
2.30		25	HA	S		*2.30m:* SAND, trace silt; bluish grey. Saturated, well graded; sand, fine to coarse.
2.90				S	S	*2.90m:* Clayey SILT, some sand, trace rootlets; grey. Soft, saturated, low plasticity; sand, fine to medium.

COMMENTS:

Hole Depth 4m

Scale 1:15 Rev.: A

GEOTECHNICS

BOREHOLE LOG

BOREHOLE No.: **BH02**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 2 OF 2

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.659803433306 -43.3239347385078	DRILL TYPE: 65mm Hand Auger	HOLE STARTED: 28/09/2022 HOLE FINISHED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: HA	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL									ENGINEERING DESCRIPTION						
GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION	FLUID LOSS (%)	WATER	CORE RECOVERY (%)	METHOD	CASING	TESTS	SAMPLES	RL (m) / DEPTH (m)	GRAPHIC LOG	MOISTURE CONDITION / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	SHEAR STRENGTH (kPa)	COMPRESSIVE STRENGTH (MPa)	DEFECT SPACING (cm)	Description and Additional Observations
			100	HA				3.5		S	S				[CONT] *2.90m:* Clayey SILT, some sand, trace rootlets; grey. Soft, saturated, low plasticity; sand, fine to medium.
								7 4.0							*3.30m:* Organic clayey SILT, trace sand; dark brownish grey. Soft, saturated, medium plasticity; sand, fine to medium; organics, rootlets and fibrous.
								4.5							4m: Target depth
								6 5.0							
								5.5							

COMMENTS:

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:04 am - Produced with Core-GS by GeRoc

BOREHOLE No.: **BH03**
Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610
SHEET: 1 OF 2

GEOTECHNICS

BOREHOLE LOG

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.658268471875 -43.3246103184114	DRILL TYPE: Dando Terrier Rig	HOLE STARTED: 28/09/2022
		DRILL METHOD: PR	HOLE FINISHED: 28/09/2022
R.L.:	11.00m		DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL — ENGINEERING DESCRIPTION

Columns: GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION | FLUID LOSS (%) | WATER | CORE RECOVERY (%) | METHOD | CASING | TESTS | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | MOISTURE CONDITION / WEATHERING | STRENGTH/DENSITY CLASSIFICATION | SHEAR STRENGTH (kPa) | COMPRESSIVE STRENGTH (MPa) | DEFECT SPACING (mm) | Description and Additional Observations

Water: 28/09/2022 (water level at approx. 0.5 m)

Depth interval (m)	Core Recovery (%)	Method	Casing
0.0 – 1.0	90	PR	128mm PQ
1.0 – 2.0	95	PR	128mm PQ
2.0 – 3.0	100	PR	128mm PQ

RL (m): 10 at 1.0 m depth; 9 at 2.0 m depth.

Depth (m)	Moisture	Strength/Density	Description and Additional Observations
0.00			*0.00m:* Core Loss.
0.10	M	St	*0.10m:* Sandy SILT, trace rootlets; dark brown. Stiff, moist, non-plastic; sand, fine.
0.35	W		*0.35m:* Sandy SILT; dark brown. Stiff, moist, non-plastic; sand, fine. *0.40 - 0.50m:* Wet.
0.50	S		*0.50m:* SAND, some silt; greyish brown with orange mottling. Saturated, well graded, non-plastic; sand, fine to medium. *0.80 - 0.90m:* Greyish brown with orange and dark orange mottling. Sand, fine to coarse.
0.90		St	*0.90m:* SILT, some sand; brownish grey with orange mottling. Stiff, saturated, non-plastic; sand, fine to medium.
1.00			*1.00m:* Core Loss.
1.05	S		*1.05m:* Silty SAND; bluish grey. Saturated, poorly graded; sand, fine.
1.10			*1.10m:* SAND; greyish brown with orange and dark orange mottling. Saturated, well graded; sand, fine to coarse. *1.30 - 1.40m:* Brownish orange.
1.40		F	*1.40m:* Sandy SILT; brownish grey with orange mottling. Firm, saturated, well graded, non-plastic; sand, fine to medium.
1.60			*1.60m:* SILT, some clay, trace sand; grey with orange mottling. Firm, saturated, low plasticity; sand, fine.
2.00			*2.00m:* Silty SAND; greyish brown with orange mottling. Saturated, well graded; sand, fine to medium. *2.20 - 2.25m:* Brown with orange mottling. Sand, fine to coarse.
2.25		S	*2.25m:* SILT, some clay, trace sand; bluish grey with orange mottling. Soft, saturated, low plasticity; sand, fine.
2.40			*2.40m:* SILT, some sand; greyish brown with orange mottling. Soft, saturated, non-plastic; sand, fine to medium.
2.55			*2.55m:* SAND; bluish grey. Saturated, well graded; sand, fine to coarse.
2.60		S	*2.60m:* Clayey SILT; grey. Soft, saturated, low plasticity. *2.85 - 2.90m:* Trace organics (fibrous).
2.90			*2.90m:* Organic clayey SILT; dark greyish brown. Soft, saturated, medium plasticity; organics, rootlets and

COMMENTS: 50mm Piezometer pipe installed at BH03 location to approximately 3.8m.

Hole Depth
4m

Scale 1:15 Rev.: A

BoreLog - 10/10/2022 11:15:06 am - Produced with Core-GS by GeRoc

BOREHOLE No.: **BH03**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 2 OF 2

GEOTECHNICS

BOREHOLE LOG

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.658268471875 -43.3246103184114	DRILL TYPE: Dando Terrier Rig	HOLE STARTED: 28/09/2022 HOLE FINISHED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: PR	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL									ENGINEERING DESCRIPTION						
GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION.	FLUID LOSS (%)	WATER	CORE RECOVERY (%)	METHOD	CASING	TESTS	SAMPLES	RL (m) / DEPTH (m)	GRAPHIC LOG	MOISTURE CONDITION / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	SHEAR STRENGTH (kPa)	COMPRESSIVE STRENGTH (MPa)	DEFECT SPACING (cm)	Description and Additional Observations
			100	PR	128mm PQ			3.5		S	S				fibrous. *3.20m:* Clayey SILT, trace organic; dark brownish grey. Soft, saturated, medium plasticity; organics, rootlets and fibrous. *3.30 - 4.00m:* Grey.
								7 4.0							4m: Target depth
								4.5							
								6 5.0							
								5.5							

COMMENTS: 50mm Piezometer pipe installed at BH03 location to approximately 3.8m.

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:06 am - Produced with Core-GS by GeRoc

GEOTECHNICS

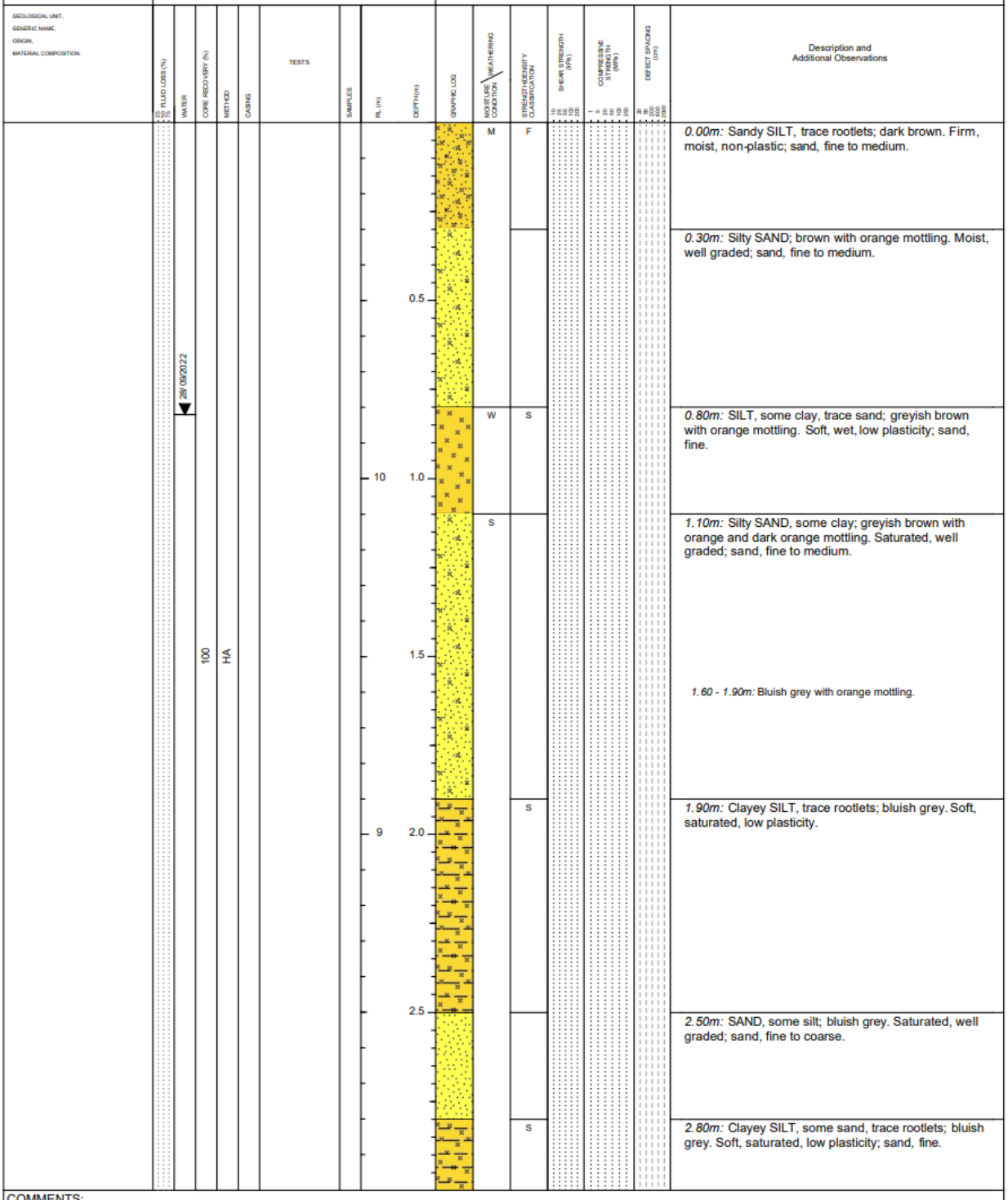
BOREHOLE LOG

BOREHOLE No.: **BH04**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 1 OF 2

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.658711097462 -43.3251307213666	DRILL TYPE: 65mm Hand Auger	HOLE STARTED: 28/09/2022 HOLE FINISHED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: HA	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG



COMMENTS:

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15.08 am - Produced with Core-GS by GeiRoc

BOREHOLE No.: **BH04**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 2 OF 2

GEOTECHNICS

BOREHOLE LOG

PROJECT: G CH WDC 65 Rangiora Woodend	LOCATION: 65 - 65A Rangiora Woodend Road — JOB No.: 1017455.0001
CO-ORDINATES: (WGS84) 172.658711097462 -43.3251307213666	DRILL TYPE: 65mm Hand Auger — HOLE STARTED: 28/09/2022
R.L.: 11.00m	DRILL METHOD: HA — HOLE FINISHED: 28/09/2022 — DRILLED BY: GEOTECHNICS
DATUM: NZVD2016	DRILL FLUID: N/A — LOGGED BY: JEBR — CHECKED: CXPG

Core Recovery (%)	Method	RL (m)	Depth (m)	Moisture Condition	Strength/Density Classification	Description and Additional Observations
100	HA		3.5	S	S	*3.00m:* Organic clayey SILT; dark brownish grey. Soft, saturated, low plasticity; organics, rootlets and fibrous.
		7	4.0			4m: Target depth
			4.5			
		6	5.0			
			5.5			

COMMENTS:

Hole Depth 4m

Scale 1:15 Rev.: A

BoreLog - 10/10/2022 11:15:08 am - Produced with Core-GS by GeRoc

BOREHOLE No.: **BH05**

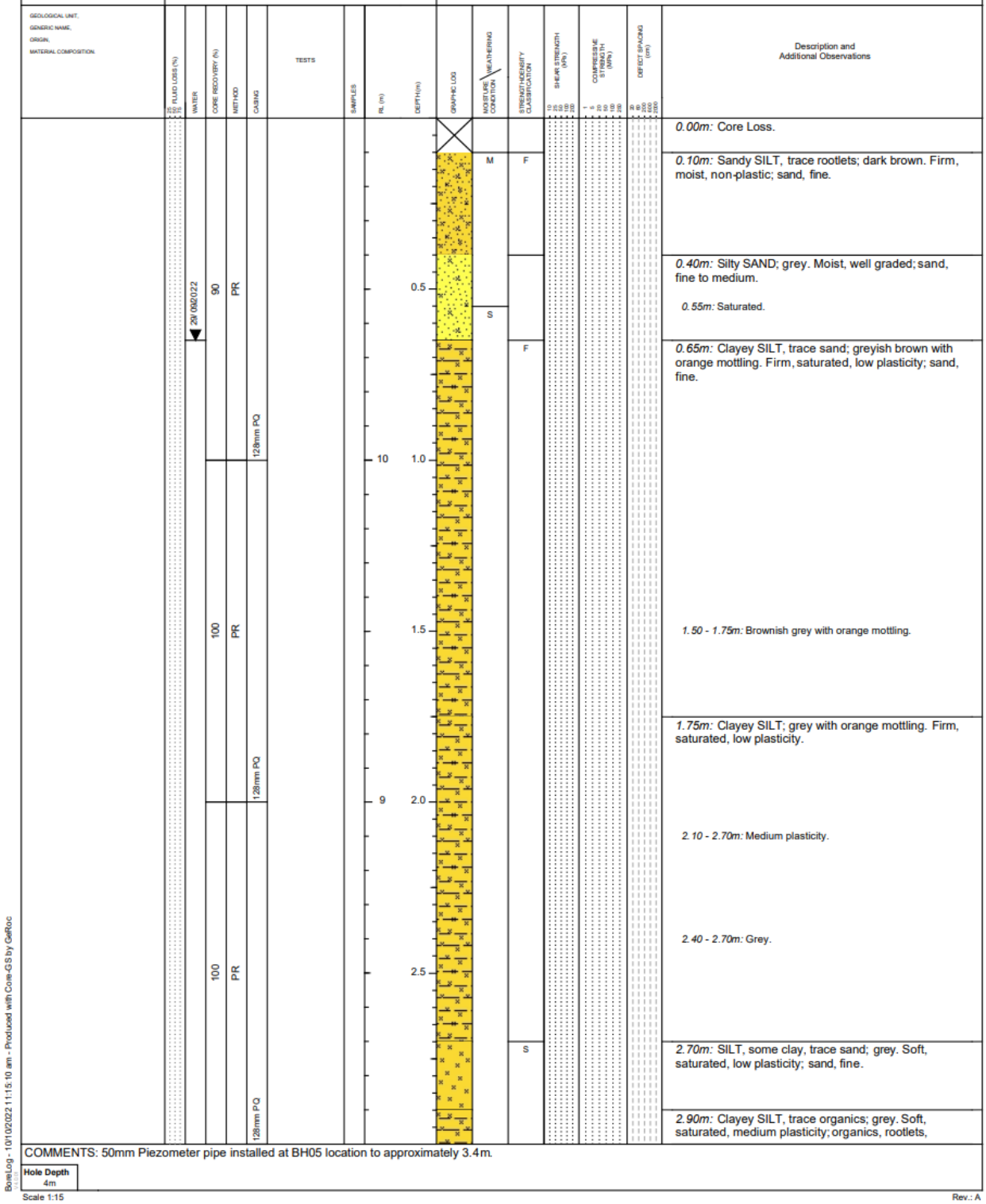
Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 1 OF 2

GEOTECHNICS

BOREHOLE LOG

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.656545673632 -43.3261076517934	DRILL TYPE: Dando Terrier Rig	HOLE STARTED: 29/09/2022 HOLE FINISHED: 29/09/2022
R.L.:	11.00m	DRILL METHOD: PR	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG



COMMENTS: 50mm Piezometer pipe installed at BH05 location to approximately 3.4m.

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:10 am - Produced with Core-GS by GeRoc

BOREHOLE No.: **BH05**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 2 OF 2

GEOTECHNICS

BOREHOLE LOG

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.656545673632 -43.3261076517934	DRILL TYPE: Dando Terrier Rig	HOLE STARTED: 29/09/2022 HOLE FINISHED: 29/09/2022
R.L.:	11.00m	DRILL METHOD: PR	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL														ENGINEERING DESCRIPTION
GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION	FLUID LOSS (%)	WATER	CORE RECOVERY (%)	METHOD	CASING	TESTS	SAMPLES	RL (m)	DEPTH (m)	GRAPHIC LOG	MOISTURE CONDITION / WEATHERING	STRENGTH/DENSITY CLASSIFICATION	SHEAR STRENGTH (kPa)	COMPRESSIVE STRENGTH (MPa)	DEFECT SPACING (cm)	Description and Additional Observations
			100	PR	128mm PQ				3.5							fibrous and amorphous. Shell fragments. *3.00 - 3.60m:* Dark brownish grey.
																3.60 - 3.80m: Grey.
							S	7	4.0		S					*3.80m:* SAND; grey. Saturated, well graded; sand, fine to coarse.
									4.5							4m: Target depth
								6	5.0							
									5.5							

COMMENTS: 50mm Piezometer pipe installed at BH05 location to approximately 3.4m.

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:10 am - Produced with Core-GS by GeRoc

GEOTECHNICS

BOREHOLE LOG

BOREHOLE No.: **BH06**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 1 OF 2

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.656082002877 -43.3255602793614	DRILL TYPE: 65mm Hand Auger	HOLE STARTED: 28/09/2022 HOLE FINISHED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: HA	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL / ENGINEERING DESCRIPTION

Depth (m)	RL (m)	Samples	Tests	Casing	Method	Core Recovery (%)	Water	Fluid Loss (%)	Graphic Log	Moisture Condition / Weathering	Strength/Density Classification	Shear Strength (kPa)	Compressive Strength (MPa)	Defect Spacing (cm)	Description and Additional Observations
0.0										M	F				*0.00m:* SILT, trace rootlets and sand; dark brown. Firm, moist, non-plastic; sand, fine.
0.3											S				*0.30m:* SILT, some clay, trace sand; brown with orange mottling. Soft, moist, low plasticity; sand, fine.
0.5							28/09/2022								*0.60 - 0.70m:* Brown with orange and dark orange mottling.
										W					*0.70 - 1.30m:* Greyish brown with orange mottling. Wet.
1.0	10														*1.10m:* Saturated.
1.3										S					*1.30m:* Clayey SILT, some sand; brownish orange. Soft, saturated, low plasticity; sand, fine to coarse.
1.4															*1.40m:* Clayey SILT; greyish brown with orange mottling. Soft, saturated, low plasticity.
1.5															*1.90 - 2.20m:* Bluish grey with orange mottling.
2.0	9					100									*2.20 - 2.50m:* Trace organics (fibrous); bluish grey.
2.5					HA										*2.50m:* Organic clayey SILT; grey. Soft, saturated, low plasticity; organics, rootlets and fibrous.

COMMENTS:

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:12 am - Produced with Core-GS by GeRoc

GEOTECHNICS

BOREHOLE LOG

BOREHOLE No.: **BH06**

Hole Location: 65 - 65A Rangiora Woodend Road, Woodend, 7610

SHEET: 2 OF 2

PROJECT: G CH WDC 65 Rangiora Woodend		LOCATION: 65 - 65A Rangiora Woodend Road	JOB No.: 1017455.0001
CO-ORDINATES: (WGS84)	172.656082002877 -43.3255602793614	DRILL TYPE: 65mm Hand Auger	HOLE STARTED: 28/09/2022 HOLE FINISHED: 28/09/2022
R.L.:	11.00m	DRILL METHOD: HA	DRILLED BY: GEOTECHNICS
DATUM:	NZVD2016	DRILL FLUID: N/A	LOGGED BY: JEBR CHECKED: CXPG

GEOLOGICAL														ENGINEERING DESCRIPTION
GEOLOGICAL UNIT, GENERIC NAME, ORIGIN, MATERIAL COMPOSITION	FLUID LOSS (%)	WATER	CORE RECOVERY (%)	METHOD	CASING	TESTS	SAMPLES	RL (m)	DEPTH (m)	GRAPHIC LOG	MOISTURE / WEATHERING CONDITION	STRENGTH/DENSITY CLASSIFICATION	SHEAR STRENGTH (kPa)	COMPRESSIVE STRENGTH (MPa)	DEFECT SPACING (cm)	Description and Additional Observations
			100	HA					3.5							[CONT] *2.50m:* Organic clayey SILT; grey. Soft, saturated, low plasticity; organics, rootlets and fibrous.
								7	4.0							4m: Target depth
									4.5							
								6	5.0							
									5.5							

COMMENTS:

Hole Depth 4m

Scale 1:15

Rev.: A

BoreLog - 10/10/2022 11:15:12 am - Produced with Core-GS by GeRoc

STORMWATER TREATMENT FACILITY FEASIBILITY

Box Drain Woodend

Final

Waimakariri District Council

8 October 2025

STORM ENVIRONMENTAL LTD

Box Drain Stormwater Treatment Facility Feasibility Report

Project No:	STRM-WDC01
Document Title:	Box Drain Stormwater Treatment Facility Feasibility Report
Revision:	0
Date:	8 October 2025
Client Name:	Waimakariri District Council
Author:	Tom Parsons
	Stephanie Dijkstra

Document history and status

Revision	Date	Description
A	18 August 2025	Draft for client review
B	19 August 2025	Draft for client review
C	22 August 2025	Updated following client comments
0	1 October 2025	Final

Cover photo courtesy of Waimakariri District Council

Contents

1 Introduction

Waimakariri District Council ("Council") engaged Storm Environmental Ltd to consider a range of feasible options for stormwater management of flows entering Box Drain from part of the existing urban area of Woodend and to recommend a preferred option. The discharge is of significance to local mana whenua as it enters into Tuahiwi Stream, and flows through Kaiapoi Māori reserve MR873, and ultimately enters Ruataniwha awa (Cam River).

Council recently purchased the property at 65-65A Rangiora Woodend Road and has proposed the development of a stormwater treatment facility. The total site area is approximately 4.9 ha.

This report expands on the earlier *Stormwater Treatment Facility Options, Box Drain Woodend* (Storm Environmental, 2024) which identified a preferred option of an offline ephemeral first flush basin and treatment wetland. Since that report there has been:

1. Collection of field data; topographic survey (Council), groundwater level and Box Drain water level data has been collected (WSP)
2. Investigations into and analysis of the hydrogeology at the site (WSP)
3. Updating of the hydraulic model and testing the proposed scheme (Council)
4. Ecological baseline assessment of the existing ecological condition and values
5. Stormwater sampling upstream and downstream of the Box Drain (commenced Nov 2024 and concluding Nov 2025)

These data have been used to inform this report. This report sets out to:

1. Describe the feasibility of the scheme
2. Update the preferred option description, form, features and extentconsidering the further information
3. Illustrate how the cultural objectives may be incorporated into the design
4. Provide an indicative cost estimate

A Project Control Group ("PCG") has been established to guide the project. Membership is of Council staff, with a representative from Ngāi Tūāhuriri alongside the PCG providing input on key milestone deliverables. The proposed gateway engagement process was agreed at project initiation is set out below (Figure 1-1) with the green box showing work complete and the red dashed box indicating the current stage. The need for a feasibility stage was not identified at the project outset. This report aims to provide sufficient information to the Project Control Group ("PCG") to decide on progressing the project to the next design phase.

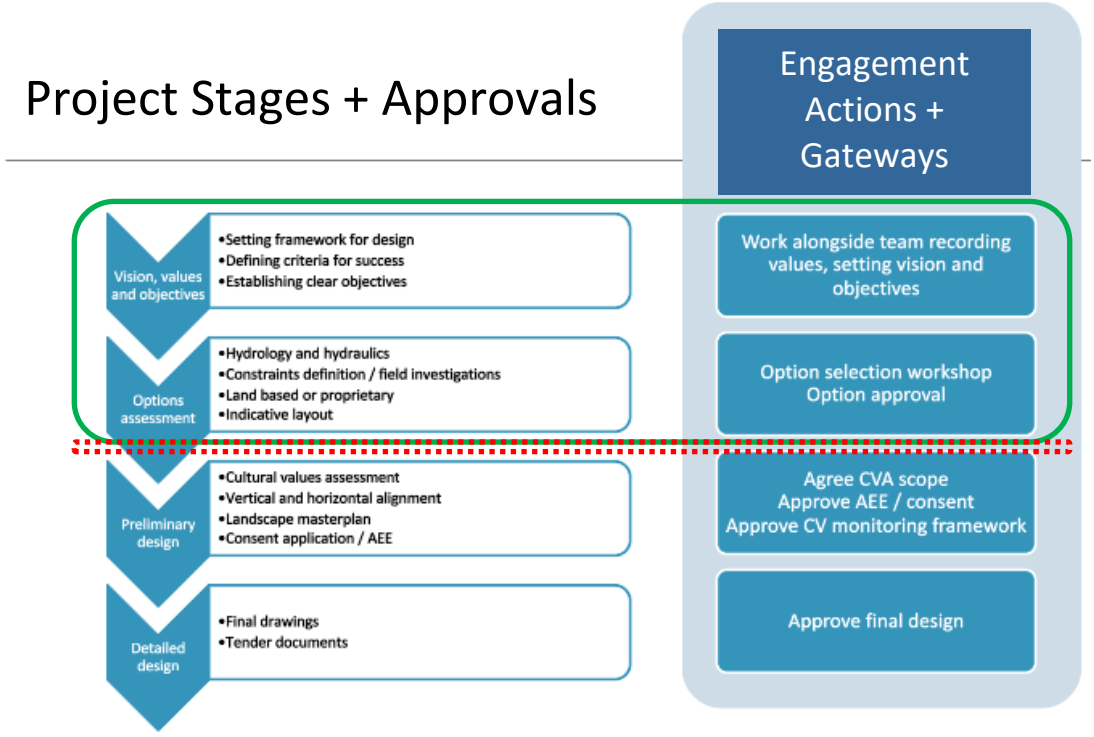


Figure 1-1 Approvals gateways and current progress

All levels used in this report are in New Zealand Vertical Datum 2016 (NZVD) unless otherwise stated.

2 Project vision, values and objectives

During the PCG meeting on the 12th March 2024 the values, vision and objectives for the Box Drain treatment upgrade were established. The vision statement and project values are replicated here from the Options report (Storm Environmental, 2024) for easy reference:

> *"Improve water quality from the Box Drain catchment to increase mahinga kai opportunities in Tuahiwi stream and enhance cultural values of the whenua."*

The values and objectives discussed at the meeting are provided below (Table 2-1).

Table 2-1 Project values

Value	Objective	Commentary
Native Biodiversity	Restore the Whenua utilising the Black Maps as a guide	The Black Maps and historic imagery show the NE extent of Box Drain passing through a grassland complex, with grasses, flax and tutu. The rest of the site was part of the wetland complex with stream channels running through the southern part of the site
	Return parts of site to a forested wetland over the long term (50+ yrs)	Establish nursery plantings at first and then move towards taller species over time
	Seek fish egress, but not ingress	Ongoing fish salvage operations may be required to remove native fish species from facility and translocate them to a more appropriate location

	Promote bird species recovery	Guided by Ngāi Tūāhuriri as to species previously found here. Ensure plants selected provide adequate protection and have adequate food sources (e.g. mikimiki (coprosma), manuka etc) Will also aid in nuisance insect management
Customary use	Make the site available for Ngā Tūāhuriri whanau to harvest harakeke (flax) and other plants (where appropriate)	Where appropriate use weaving varieties of harakeke (flax) Integrate rongoā species into edge planting Improvements in the quality of stormwater discharge from box drain will support customary use downstream of the discharge
	Limit recreational use by wider public	Do not actively promote public use on MR873 reserve land by limiting signage and managing street frontage
Water Management	Improve downstream water quality	Focus on treatment of Total Suspended Sediment (TSS), heavy metals (particularly zinc), oil interception, Polycyclic Aromatic Hydrocarbons (PAH)
	Give effect to Te Mana o te Wai	Avoid mixing of springs and stormwater Baseflow channel to provide waterway definition
	Attenuate flood flows, where possible, and maintain drainage	Slow the discharge of water from box drain in 1-5 year Average Recurrence Interval (ARI) noting further baseflow monitoring needed
	Allow for future flows	Facility to enable connection of neighbouring MR873 (upgradient) properties
Maintenance	Enable maintenance through the design	Easy access for sediment removal from first flush basin Express the ongoing maintenance requirements for the facility

While the above values and proposed options are in keeping with the Mahaanui Iwi Management Plan *("Stormwater swales, wetlands and retention basins are appropriate land-based stormwater management options – Ngāi Tahu Subdivision and development guidelines 2.2 and Policy P6.1")* the project team acknowledge the sensitivity of the area.

3 Site description and investigations to date

As described in the Options report (Storm Environmental, 2024), the 4.9 ha site is located at 65-65A Rangiora Woodend Road (Figure 3-1), adjoining the existing Woodend urban extent and within Kaiapoi Māori reserve MR873. The site is primarily in agricultural use with one residence on site. Box Drain is located within the site, which comprises of a 900mm pipe upstream of a basic early generation (circa 2006) stormwater filtration gross pollutant trap device, followed by a 675mm diameter pipe beneath a swale with a subsoil drain. Flows from the urban area that are collected in the stormwater network upstream (28 ha) are discharged from the site with only a basic level of treatment provided by the gross pollutant trap. Box Drain downstream of the site is formed as an open channel and drains into Tuahiwi Stream (Figure 3-2). The Options report also provides a description of the:

- Historic land use
- Downstream environment
- Upstream catchment and flooding concerns about Gibbs Drive
- Hydrogeology, hydrology, modelling and initial device sizing
- Three options investigated, values assessment and a multi criteria option selection

The options report concluded with a recommendation to build an offline first flush basin (ephemeral wetland) followed by a treatment wetland (Figure 3-3).

Figure 3-1 Site location with the site is outlined in red and the existing stormwater network in green

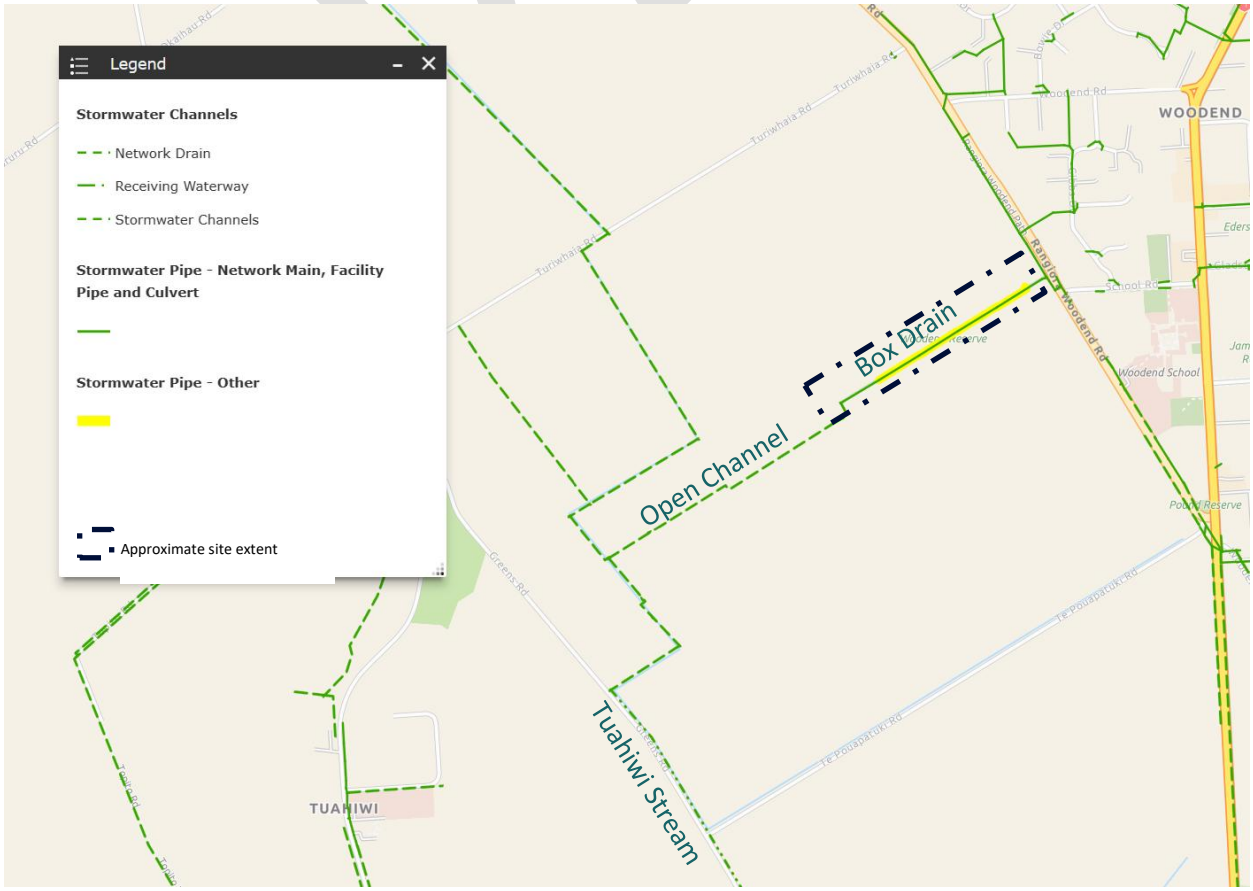


Figure 3-2 Drainage plan (Source: Council OpenMap Viewer)

Figure 3-3 Indicative offline system layout

4 Feasibility stage investigations

Two investigations were commissioned by Council during the feasibility stage:

1. A hydrogeological assessment: *Box Drain - Hydrogeology Assessment Groundwater Modelling for Stormwater Design Feasibility Assessment - Design 1*, WSP, August 2025
2. Hydraulic model updates and modelling of the preferred option: *Woodend Box Drain Stormwater Treatment Facility Box Drain Hydraulic Feasibility Modelling,* WDC, July 2025

The key findings of these two studies are provided below. Copies of the final reports are included in Appendix A.4 and A.5.

4.1 Hydrogeology

The following excerpts within the boxes below are taken from the WSP report (page numbers provided reference the WSP report page numbering):

- The site is underlain with fine sediments (mainly silts) down to a depth of between 10 m and 15 m below ground level (m bgl). These sediments have a low permeability and are thought to be part of the Christchurch Formation. No impermeable iron pan was encountered during geotechnical investigations on the site. Below this lies the highly permeable Riccarton Gravel Aquifer which is confined by the overlying fine sediments (Page 3).
- The shallow groundwater levels at the site and the surrounding areas are generally at less than 2 m below the ground surface. Due to the low permeability of the soils beneath the site and the shallow groundwater table, the shallow groundwater level tends to rise quickly following heavy rainfall. Nonetheless, the groundwater level is strongly controlled by the network of open channels that were historically installed to drain the land and keep groundwater levels below ground to allow for farming. (Page 8)
- *[There are]* distinct seasonal patterns in the shallow groundwater level timeseries recorded at the site, with high groundwater levels generally occurring in winter and spring, and low groundwater levels during summer and autumn. As a result, the subsoil drain beneath the Box Drain culvert will mainly drain groundwater during the winter and spring period. (Page 8)
- The open channel in which the subsoil drain beneath the Box Drain culvert flows into [*Figure 4-1*], has an invert level of 7.28 m RL. WSP installed a temporary water level recorder in the open channel to understand how water levels fluctuate. This showed the open channel has a dry weather water depth that is usually no more than about 0.1 m and the dry weather stage height is thus about 7.38 m RL. The invert levels of the proposed stormwater facility need to be well-above this level to allow free outflow under gravity to the open channel. However, the open channel water level can temporarily rise by about 0.85 m following heavy rainfall. This rise of 0.85 m to a level of 8.36 m RL occurred on the 29 April - 2 May 2025 event with 102.5 mm of rainfall in 48 hours as shown in [
- *Figure 4-3*] (monitoring well locations shown in [*Figure 4-2*]). This increase in the drainage level would have reduced the drainage capacity of the open channel and subsoil drain, resulting in a gradual rise of groundwater levels across the site (only groundwater levels for BH03 and BH05 are shown which are closed to the proposed wetland). Whilst the open channel water levels recovered to below the proposed wetland invert level within about 2 days, groundwater levels stayed elevated for about a month compared to pre-event levels (Figure 4-4). However, the associated increased groundwater inflow is unlikely to compromise the ability for the proposed wetland to drain. The open channel stage height fell below 7.5 m RL on 24 May 2025 and generally remain at about 7.4 m RL in the period from June to August 2025. Occasional increases to above 7.8 m RL occurred five times over that period in response to rainfall events, but never lasted more than 1 day. (Page 7)
- The open channel stage height remains below the proposed wetland operational range of stage heights (7.8-7.995 m RL) most of the time during the April-August 2025 monitoring period, and only exceeded the minimum level on five occasions for no more than 1 day. (Page 7)

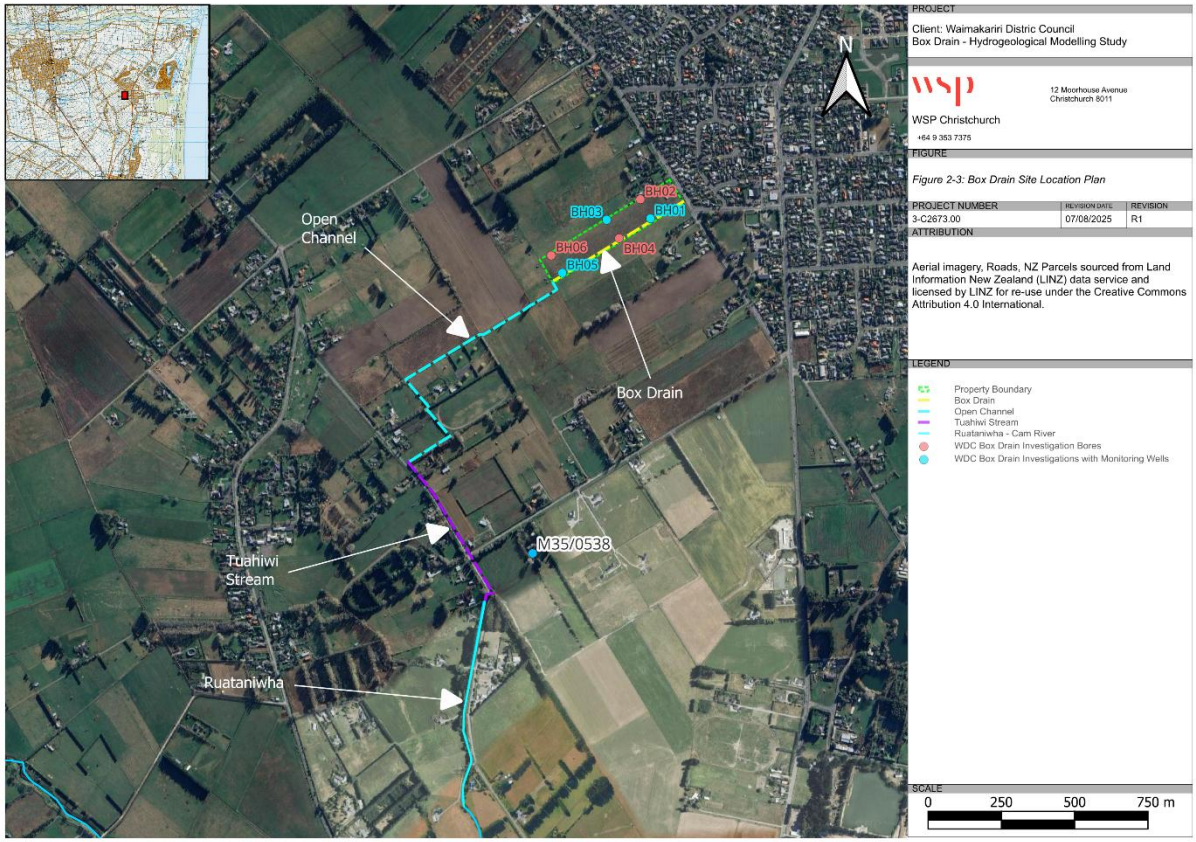


Figure 4-1 Location of groundwater bores and local drainage (replicated from Fig 2-3 WSP 2025)

Figure 4-2 Location of groundwater bores (replicated from Fig 2-4 WSP 2025)

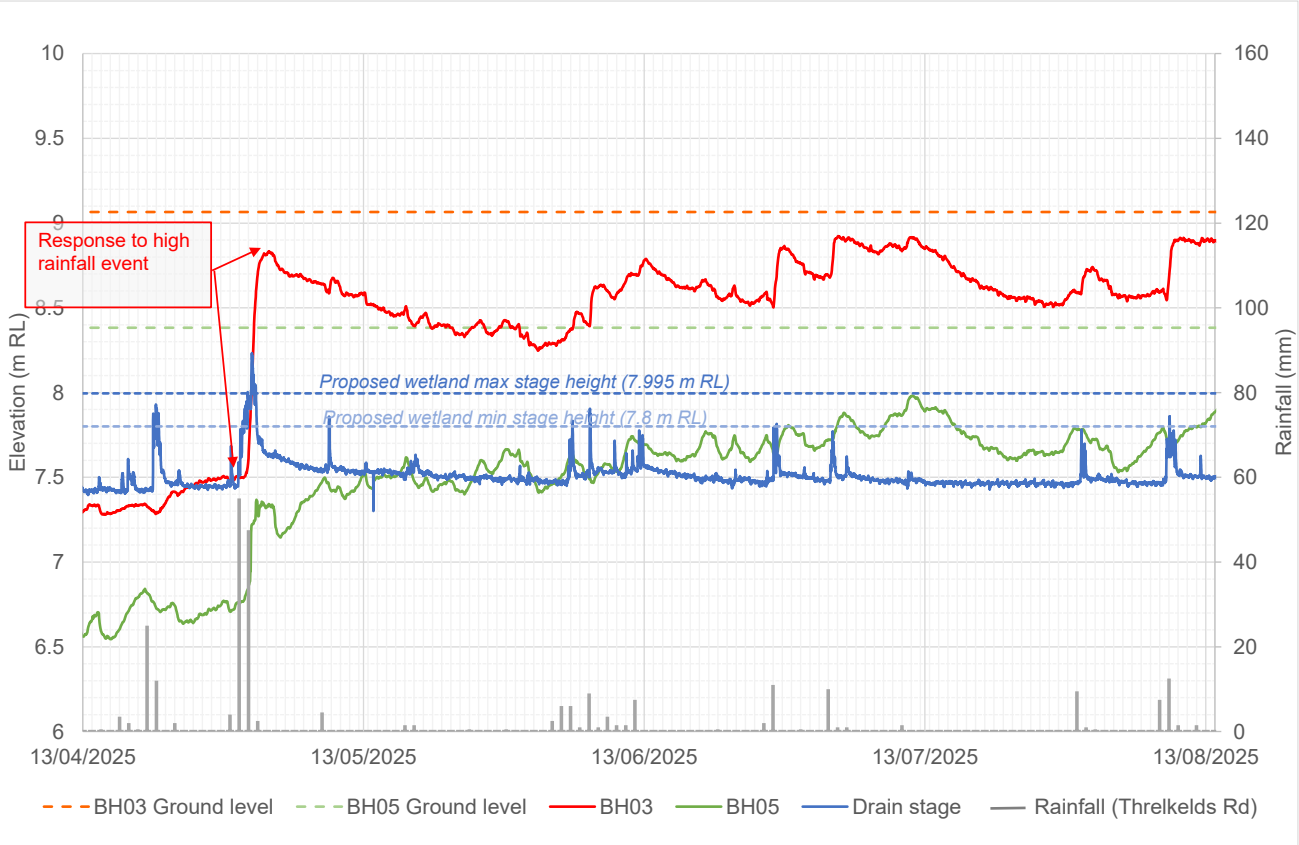


Figure 4-3 Open channel stage height and groundwater level time series during April 2025 storm event at Box Drain (replicated from Fig 2-4 WSP 2025)

- If the proposed stormwater facility is constructed below the groundwater table, it will also capture groundwater inflows. After passing the stormwater facility, the water will flow out via an outflow structure at the southeastern end of the site into the existing open channel. Water can only flow out the wetland if the stage height in the receiving open channel is lower than the wetland water level. Similarly, the winter high groundwater levels can only be controlled by the existing subsoil drain and by the proposed stormwater facility if the open channel stage height is sufficiently below the required drainage levels of the proposed wetland or at the subsoil drain invert level. (Page 8)
- If the open channel stage height rises above the operational water level of the proposed stormwater facility, this will reduce the drainage of the stormwater facility, and its water levels may rise above the operational maximum stage height. If the proposed stormwater facility water levels rise above the surrounding ground level, parts of the site will be flooded. Under those circumstances, groundwater levels will also gradually rise and potentially reach the surface (Page 8).
- The feasibility of the proposed stormwater design depends on the ability of the design to minimise groundwater inflow during winter and limit notable rises in nearby shallow groundwater levels, as persistent water ponding conditions could lead to damage of wetland planting, hence needs to be appropriately selected. (Page 9)
- In an average year in the current state (i.e., base case), the groundwater inflows to the subsoil drain beneath the Box Drain culvert are expected to be highest in late-winter early-spring at 55 m^3/day. Summer inflows to the subsoil drain would likely be less than 5 m^3/day and at times no inflows would occur at all. Nonetheless, persistent groundwater inflows at a rate above 5 m^3/day into the subsoil drain beneath the Box Drain culvert are expected to last for about 6 to 7 months each year. (Page 12)
- When [*the proposed facility*] is operational the water level in the proposed first flush basin and wetland will be mostly below the nearby groundwater level during winter, which will cause shallow groundwater to flow into the stormwater facility at a modelled rate of 49 m^3/day [*or 0.6 l/s*] (i.e., 25 m^3/day to the first flush basin and 24 m^3/day to the wetland). The subsoil drain beneath the Box Drain culvert will also draw in groundwater, but at a rate of 39 m^3/day [*or 0.5 l/s*], which is less than in the base case. This is because the stormwater facility will take over some of the groundwater drainage. Nonetheless, the total groundwater drainage at the site will increase to 88 m^3/day [*or 1 l/s*]. (Page 12)
- When the stormwater facility is operational, it will mainly influence groundwater levels in the winter season, when and where groundwater levels rise above the first flush basin invert levels and wetland

water levels, as is shown in the cross sections in [*Figure* 4-4] and Figure 3-9. Groundwater levels adjacent to the stormwater facility can be up to 0.5 m higher than the water level in the wetland. Because the wetland water levels are assumed to be controlled by its downstream outflow structure, the wetland should remain sufficiently drained at all times. In the summer season groundwater levels are similar to what they would be without the stormwater facility, hence summer water levels are the same as they are in the base case. (Page 15)

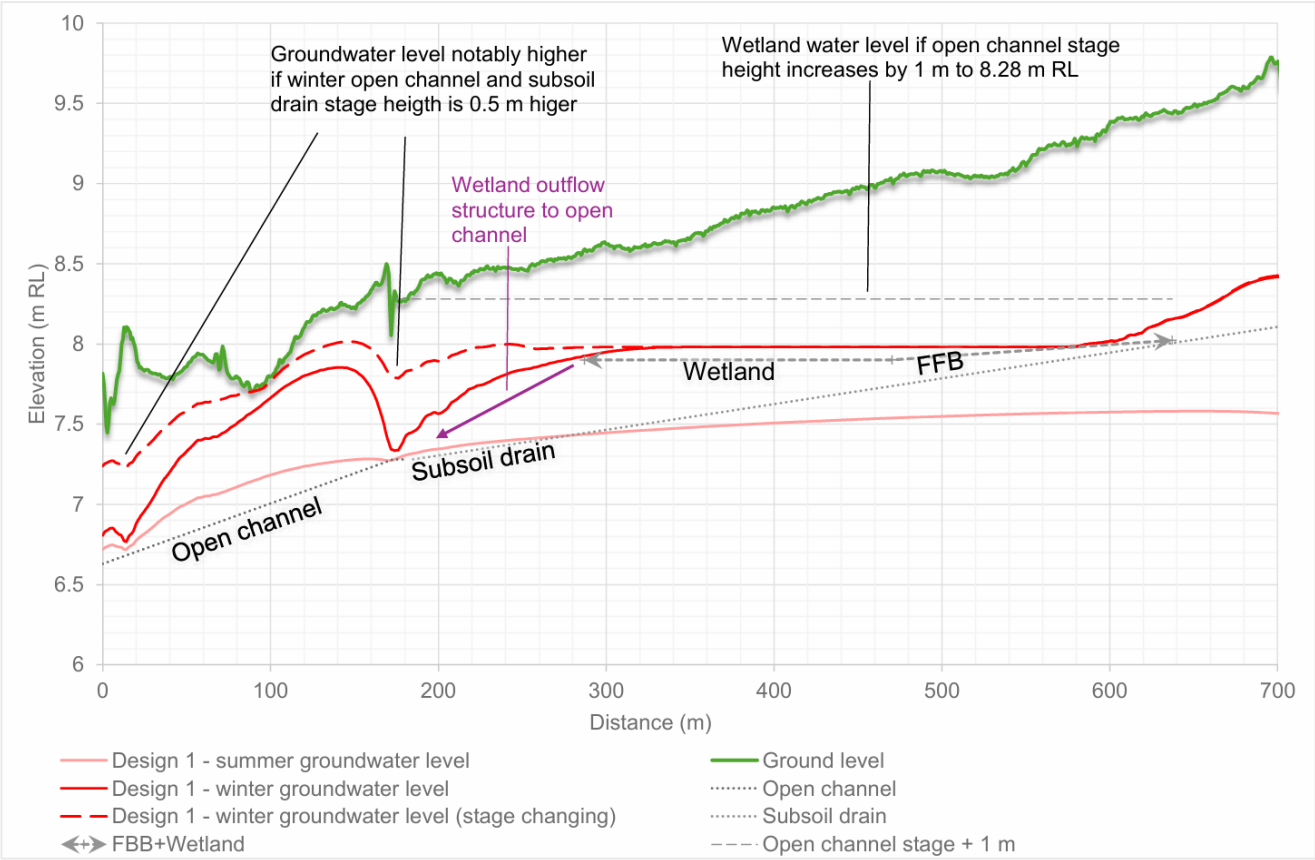


Figure 4-4 Modelled groundwater level in the Design 1 case (replicated from Fig 3-8 WSP 2025)

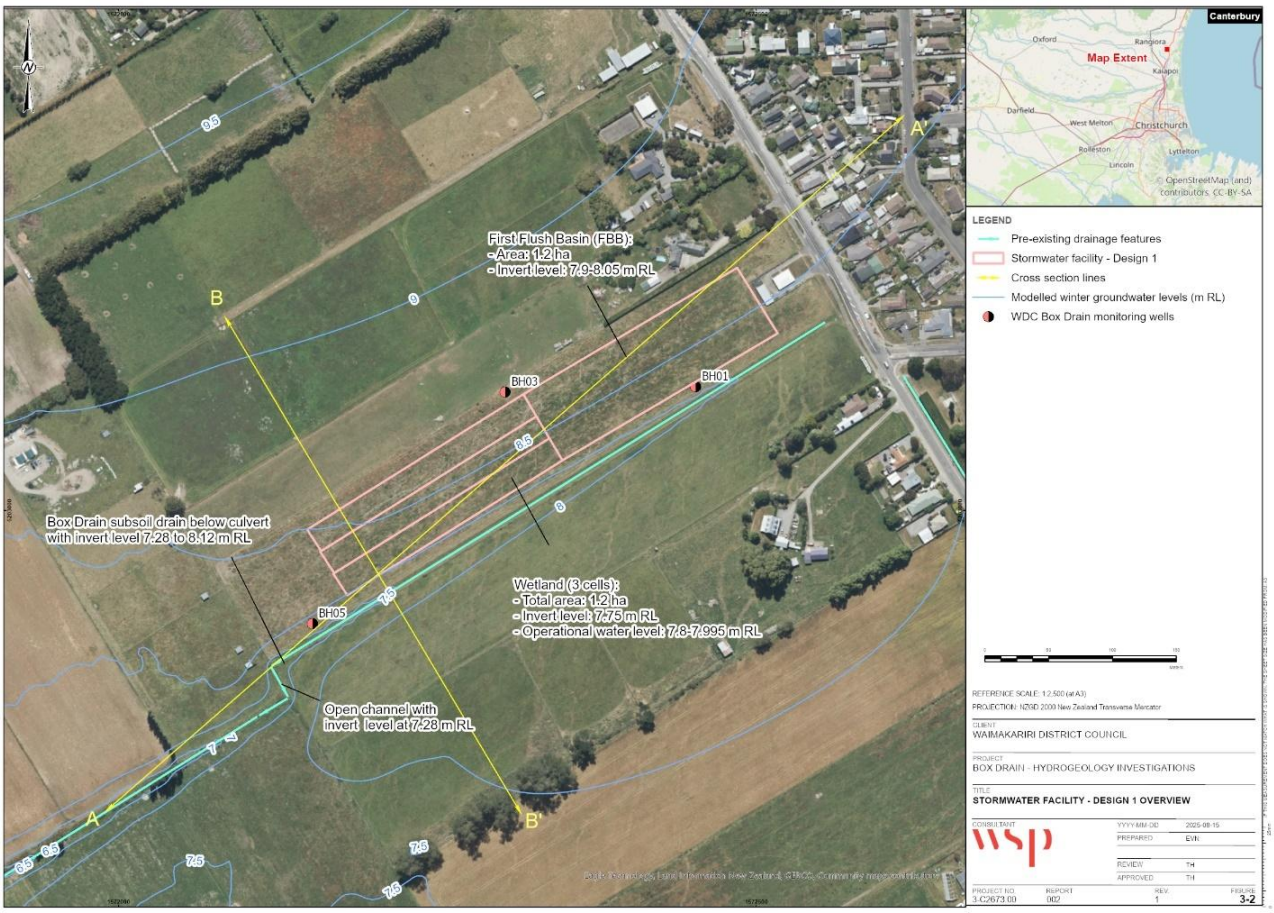


Figure 4-5 Location of Section A-A' (replicated from Fig 3-2 WSP 2025)

- Groundwater levels can be sufficiently controlled by the combination of the existing subsoil drain and the proposed stormwater facility assuming the Design 1 configuration described in Section 3, as long as the open channel water levels (i.e., stage) southwest of the site remains below the design wetland water level at all times (assumed to be between 7.8 and 7.995 m RL for Design 1). However, when the open channel water levels southwest of the site rise above the design wetland water levels, the wetland can no longer drain by gravity via the downstream outflow structure. Groundwater modelling cannot be used to assess whether the wetland can properly drain. Further investigations including hydraulic modelling and long-term water level monitoring may be required to confirm if the open channel water levels might persistently remain above the design wetland water levels during extended periods. In that case, the wetland may require pumping during those times. (Page 18)
- From the cross section in Figure 3-8 and Figure 3-9 it becomes clear that wetland outflows through the outflow structure to the southwest of the wetland, could be compromised by high groundwater levels unless the outflow structure is contained within a closed pipe that does not capture groundwater. However, a rise of more than 0.5 m of the open channel water level (i.e., stage) could impede proper outflows from the wetland, resulting in increased water depth in the wetland. (Page 18)
- A second subsoil drain could be installed at the site along the northern boundary, which would draw the groundwater table further down at the site. This will likely notably reduce, or even entirely remove the winter groundwater inflows to the wetland. This will also result in the wetland only receiving inflows from stormwater. At times of prolonged drought neither stormwater or groundwater inflows will occur, and the wetland will be completely dry for extended periods of time. (Page 18)
- The key issue is whether the open channel stage height can be sufficiently controlled, or if water backing up will become more frequent. Whilst most of the open channels drain groundwater, this groundwater contribution is small compared to flows during significant storm events. Nonetheless, the groundwater inflows, commonly referred to as baseflow, is expected to be considerably higher in the winter than in the summer season. (Page 19)

WSP conclude (Page 20):

- The groundwater modelling undertaken for Stage 3 of the project indicates that shallow groundwater levels in the area are strongly influenced by the existing open channel drainage network surrounding the site and seasonal variations in groundwater abstraction and rainfall recharge in the area. Groundwater inflows to the subsoil drain beneath the Box Drain culvert and the proposed stormwater facility are highest during winter and spring, with minimal or no inflows during dry summer periods. Persistent groundwater inflows at a rate above 5 m^3/day into the subsoil drain beneath the Box Drain culvert are expected to last for about 6 to 7 months each year. The proposed Design 1 configuration is expected to effectively manage groundwater ingress, with the stormwater facility assuming a significant portion of the drainage load, thereby reducing inflows to the existing subsoil drain beneath the Box Drain culvert.
- However, the performance of the stormwater facility depends heavily on its ability to convey flows to the open channel at the southwestern end of the site. The performance is contingent on maintaining open channel water levels below the design wetland water level. If open channel levels rise above this threshold, the wetland may not drain effectively, potentially requiring pumping to maintain functionality. The facility must also be designed to accommodate persistent groundwater inflows of more than 88 m^3/day (i.e., 1 L/s), particularly during winter, although these are expected to be minor compared to stormwater inflows during significant rainfall events.
- Future changes such as climate change, reduced groundwater abstraction, and modifications to the open channel network could alter groundwater dynamics, potentially leading to higher groundwater levels and greater inflows into the proposed stormwater facility.
- While these changes are beyond the scope of the current modelling, they should be considered in future design iterations to ensure long-term resilience and performance of the stormwater facility.

WSP recommend that (Page 20):

- We consider the available data is sufficient to inform decision making of the next stage of the stormwater facility design. However, further monitoring of the open channel stage height fluctuations at the southwestern end of the site. This will provide further information on the duration of periods of increased stage height that could impede the drainage of the stormwater facility.
- A second subsoil drain could be installed at the site along the northern boundary, which would draw the groundwater table further down at the site and notably reduce winter groundwater inflows to the stormwater facility. The efficacy of this measures can be further explored with groundwater modelling.
- Hydraulic modelling to assess the overall performance of the proposed stormwater facility design. This should include assessments of:
    - how frequent and to what extend the open channel stage height could compromise the stormwater facility's outflows, taking into account groundwater inflows and how these may vary across the seasons.
    - the through-flows of the stormwater facility, taking into account groundwater inflows and how these may vary across the seasons.

4.2 Hydraulic modelling

The following excerpts within the boxes below are taken from the Council report (page numbers provided reference the WDC memo page numbering):

- [*The modelling*] found that with the addition of the new infrastructure the flows out of Box Drain at most reduced from 1.47 m^3/s to 0.26 m^3/s in a 1 in 200-year storm event and at least reduced from 0.53 m^3/s to 0.03 m^3/s in a 25mm storm event. This also found that the [*high tailwater*] condition had a negligible effect on the function of the proposed infrastructure. (Page i)[1]

[1] The high tail water scenario is approximately mid height of the stormwater pipe. This is about or above the 'typical level' observed by WSP. The hydraulic modelling showed that in this scenario the system can provide some flood attenuation and draw down after an event, subject to ongoing design considerations. The risk that WSP highlight about drainage from the facility is more generic and identifies that at some tailwater elevation, the ability for the system to drain will be impeded, with resulting ponding in the facility.

- …in all cases downstream of the pipe outlet there is some water in Box Drain spilling into the surrounding terrain. In addition to this, the capacity of the existing pipeline is around 0.38 m^3/s and any additional flow in Box Drain is simply diverted to the swale section. (Page 10)
- Other key findings from this analysis are that the 25 mm 'first flush' event sits between the future state 005y02h and present state 005y02h rainfall events. It is also found through comparisons of the 050y03h and 050y02h rainfall events that for future state the 2-hour event shows a peakier and more adverse response, though in present state the responses are similar. This indicates that the 2-hour event should be used when analysing the system as it will provide the most intense event for each ARI (average return interval). (Page 10)
- These results show that throughout the whole drain [*from approximately 550m downstream of the pipe outfall to upstream at Rangiora Woodend Road*] the peak water levels are [*decreased*] by the [*installation*] of the new infrastructure during all the events. A larger impact can be seen in the piped section of Box Drain, above the adverse condition. Though the intensity of the weather events impacts the maximum level reached in [*this same extent*] in both cases, the infrastructure provides a similar total reduction in water levels regardless of the intensity of the weather event. (Page 19)
- [*The modelling*] shows that the adverse condition [*with high tailwater*] causes minimal impacts on the function of the new infrastructure, with its peak impact only being noticeable during the 050y02h and 200y02h storm events. (Page 26)
- These results show that for smaller storm events, specifically the 25mm 2-hour and 5-year 2 hour events, there is a noticeable reduction in the flooding upstream [*at Gibbs Drive*]. In the 50 year events and 200 year 2 hour event there is small improvement seen following the stormwater pipelines… Overall the benefits upstream are much more prominent in smaller storm events. (Page 42)
- To understand the impacts of the proposed infrastructure on flooding upstream analysis has been conducted to examine the water levels along the stormwater pipes leading up Gibbs Drive… Table 4, below, shows the water levels comparisons in Gibbs Drive in each of the events with and without infrastructure. (Page 36)

Table 2: Water level comparisons in Gibbs Drive for the different storm events at node 0436 [*with a GL of approximately 9.4*].

Event	Max WL Existing (m)	Max WL Infrastructure (m)	Existing - Infrastructure (m)
25mm 02h	9.66	9.45	0.21
005y 02h	9.67	9.46	0.21
050y 02h	9.84	9.78	0.06
050y 03h	9.80	9.75	0.05
200y 02h	9.89	9.87	0.02

It is important to note that the hydraulic model developed for testing the proposed infrastructure does not accurately represent surface storage above the stormwater network or overland flows. This means that the modelled Gibbs Drive flood levels and benefits of the proposed infrastructure may be overestimated. The model results do indicate that the proposed works have a benefit at Gibbs Drive.

A stage hydrograph providing key levels through the system is provided for the 25mm storm event (replicated below in Figure 4-6) and the 50 yr ARI – 2hr event (replicated below in Figure 4-6)). It can be seen from this plot that the drawdown time for both the first flush basin and wetland are protracted. The modelling report also states, "These hydrographs show that there are currently head losses occurring in the system in the manhole and pipe connecting Box Drain into the new first flush basin. These head losses cause water to back up along Box Drain spilling into the swale. This impact could be mitigated with the introduction of a larger pipe, and this may be investigated in future work." (Page 36)

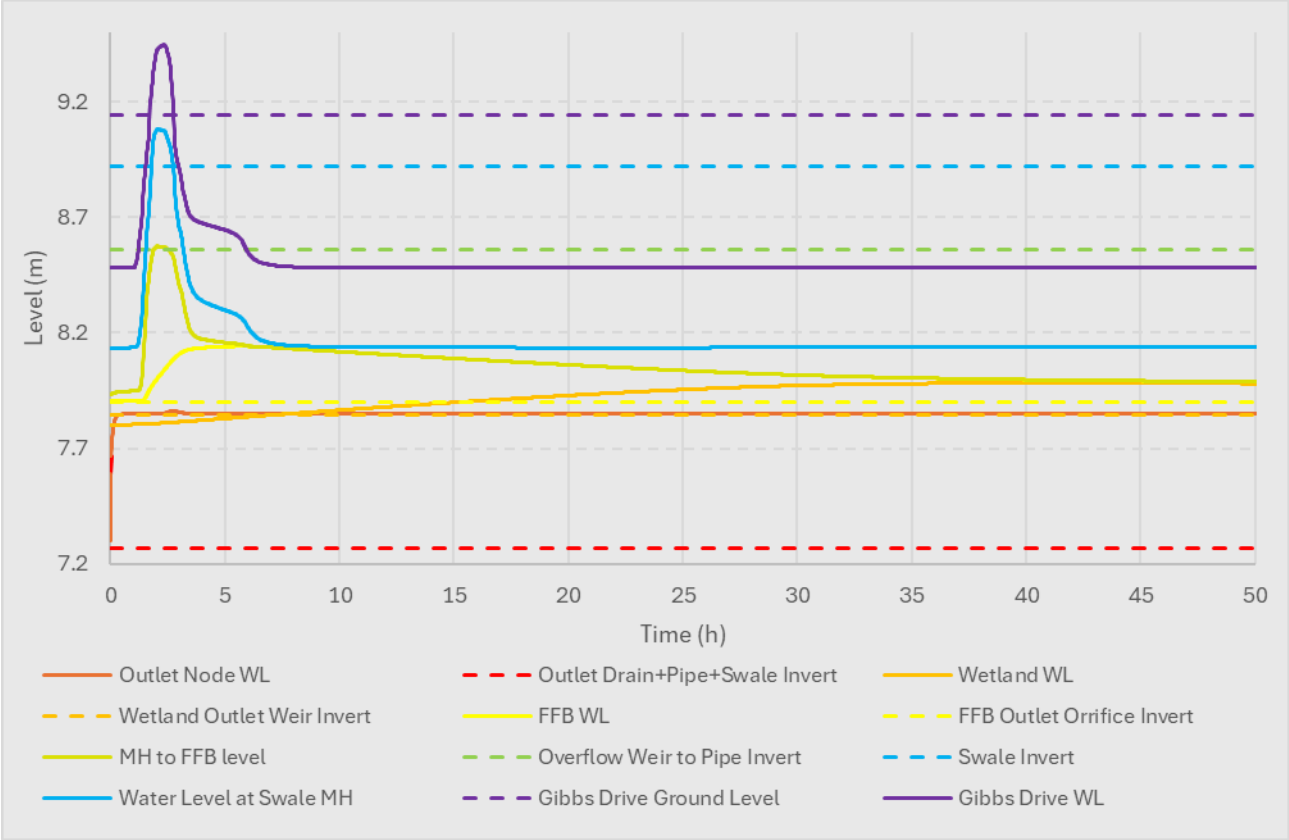


Figure 4-6 Modelled treatment facility water levels in the 25mm event (replicated from Fig 48 WDC 2025)

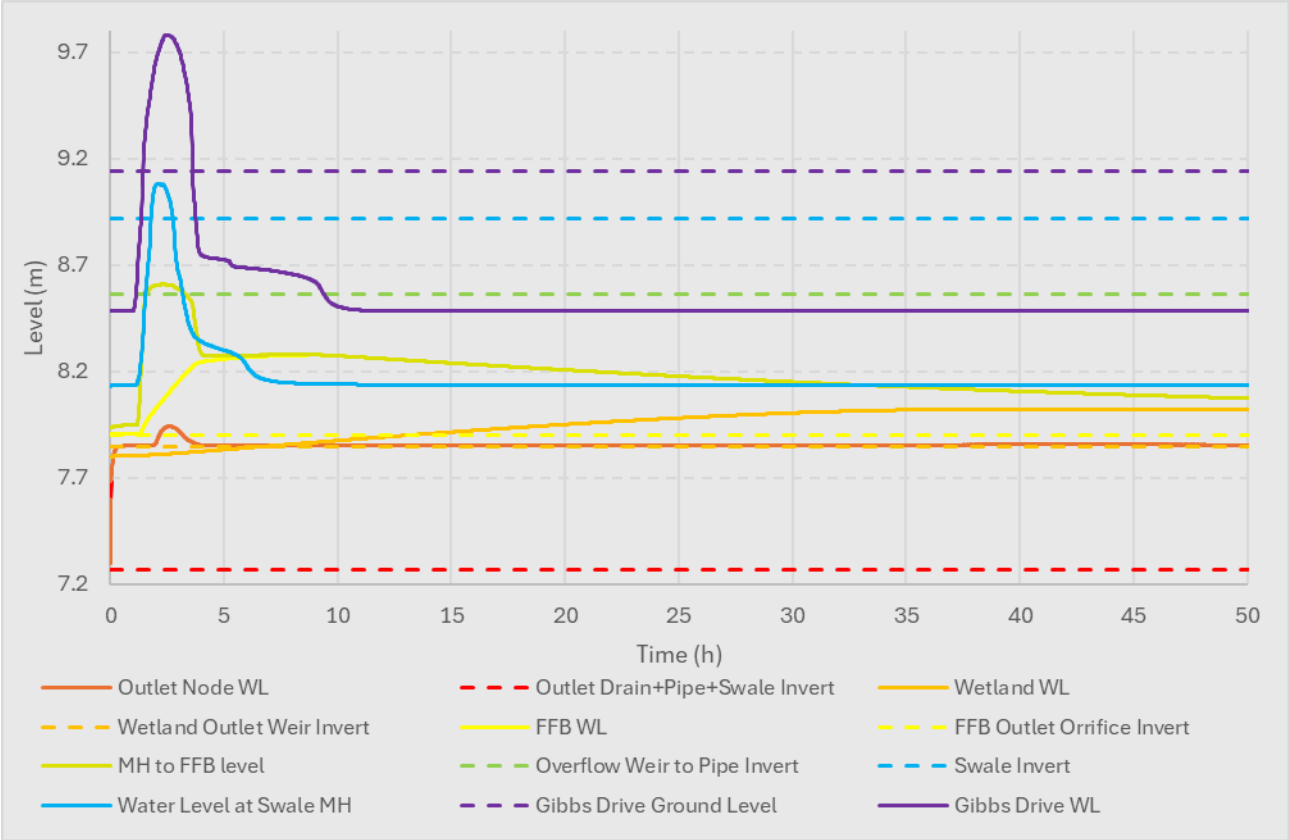


Figure 4-7 Modelled treatment facility water levels in the 50 yr ARI -2hr event (replicated from Fig 50 WDC 2025)

5 Feasibility design

5.1 System description

The proposed treatment system is described below from upstream to downstream. An indicative layout is provided in Figure 5-1, however, this is not drawn to scale. A long section is provided in Figure 5-2, with the operational water level long section in Appendix A.2. The levels provided below are indicative and need to be confirmed at later design stages.

- **First flush basin inlet** – The inlet will require a new manhole on the existing 675mm dia stormwater pipe, downstream of the GPT. The manhole will need a removable bypass weir on the continuation pipe and stoplogs on the pipe to the first flush basin, to enable complete bypass of the system for plant establishment and first flush basin maintenance. The overflow weir will need to be approximately 1m wide, the full manhole diameter and be set to a level of below 8.56m RL to enable the existing pipe to be utilised before spilling down the swale is initiated. A secondary overflow to the existing swale (at approximately 8.78m RL) could be provided for to give surety in connection and storm bypass.

  A new 675mm pipe connection from the new manhole into first flush basin with an upstream invert at manhole invert (i.e. matching incoming pipe work with an invert of approximately 8.1m RL) and a downstream invert at the first flush basin level. A cut pipe rock headwall into the first flush basin is proposed.

- **First flush basin** – The required first flush treatment volume is approximately 4,750m^3 with an operating range of 0.5m. An ephemeral wetland is proposed for the first flush basin to manage risks associated with elevated ground water levels. Planting up the sides of the basin is recommended to allow for groundwater seepage above invert level as such seepage can make maintenance of grass difficult. A 10% increase in storage volume has been included in sizing the facility to allow for plant growth. The invert of the basin will be approximately 8.06m RL at the upstream end and 7.9m RL at the downstream end to allow for drainage of the basin.

  A gravel lined low flow channel will be necessary to ensure effective drainage, the depth of which can be considered at the subsequent design stage, however due to level constraints it is likely that this will be below the outlet orifice level resulting in some localised ponding in the outfall structure and base of the low flow channel. It is likely that there will be some algae growth in this low flow channel. Alternatively, the base of the first flush basin could be raised above the levels quoted above to allow the creation of the low flow channel, this would reduce the potential impacts of tailwater on drainage, and allow a notionally 'dry' channel but would come at the expense of flood storage. The balance between these can be struck at the concept design stage.

  Side slopes of the basin of no steeper than 1:4 will be necessary to facilitate mowing above planting levels. Planting of batter slopes could allow steeper grades. Dense planting about the top of the batter adjoining neighbouring dwellings is recommended to reduce nuisance insect risks.

  As the operational water levels are set below ground levels additional excavation will be required to achieve the desired levels. Initial calculations of the total the total cut volume for the first flush basin show approximately 12,700 m^3 of cut is required, allowing for a 10% increase for landscape treatment (softening of slopes with earthworks). These estimates will need to be updated during the concept design using a civil design model.

- **First flush basin outlet** – A typical CCC outlet structure is proposed with a removable grille set a little above the invert of the outfall. A removable orifice plate with an aperture of approximately 140mm will be necessary to draw down the first flush over the desired 4 days. The top of the plate can be set to provide for flood flow overtopping, if desired, although alternative bypass options directly from the swale to the wetland are recommended to avoid mixing of first flush flows. The orifice plate crest elevation would need to be set above the swale operating levels so that the swale was activated first.

A wetland bypass pipe from the structure will be needed to allow the wetland to backflow during the plant establishment period and allow for the entire wetland to be taken offline, if needed for spill management or maintenance. This pipe will need to have a control valve at its inlet or set behind a weir to stop the wetland being bypassed during normal operation.

The invert of the outfall structure should be set approximately 100mm below the invert of the basin to allow for future basin modification if required. The invert of the orifice plate will be about 7.9m RL.

The wetland continuation pipes will connect to this structure downstream of the orifice. These pipes will need to be set at the invert of the outfall structure. Some form of flow control will be appropriate here to enable each wetland cell to be taken offline in isolation for maintenance purposes. It is desirable to be able to keep a cell online while the other is being maintained to allow some treatment during maintenance. As the connecting pipes will only be small diameter, approximately 300mm, it may be possible to rely on use of temporary bungs to avoid costs with installation of stop logs or other control measures. Permanent flow control can be considered at concept design stage.

- **Wetland** – The wetland will need a total volume of approximately 13,400 m^3. The number of cells that the wetland is divided into will need to be considered further at concept design. This could be between 1 and 3 cells, depending on landscape design, requirements for operational flexibility. available footprint and other factors. The wetland average ground level (excluding inlet and outlet pools) will be approximately 7.8m RL with a 150mm deep operating range between 7.85m RL and 8.0m RL. This minimum operating water level is about the upstream orifice invert. The invert of the wetland about the inlet pool should be no deep than 100mm below the minimum operating water level to maintain healthy plant growth. It also allows for 50mm head loss between the wetland and first flush basin. The wetland operating levels may need to be adjusted during the design to fit the head losses expected through the first flush basin outlet structure.

  The wetland minimum operating level will be the most difficult to modify during operation as it will be set by the wetland invert level at the midpoint of the length of the wetland. Whilst it may be possible to trim a channel through the wetland to lower this level, this would concentrate flows and reduce the effectiveness of the wetland. The minimum operating level is above the water marks on the existing head wall at the outlet of the box drain pipe into the open channel and needs to be finalised based upon the downstream head losses. The level is below water levels measured during storm event on 1-2 May in the downstream drain, indicating that drainage will be impeded during large storm events.

  The shape of the wetland is proposed to be a simple continuous increase in level to a midpoint along the wetland where it will slope down at a matching grade to the outfall level. This simple approach avoids the need for wet pools mid wetland, reducing the risks of stagnation, loss in plants along the edge of the pool and difficulties in maintenance. A deeper pool is proposed at the inlet and outlet to the wetland to avoid the structures from becoming overgrown with vegetation. A standard concrete headwall is proposed at the wetland inlet. The inlet wetland pool will not be able to be drained without pumping as it will be set below the invert of the existing pipe.

  As with the first flush basin, the operating levels are set well below existing ground levels, giving rise to a total excavation volume of approximately 20,500 m^3, well in excess of the operating volume. This figure includes a 10% allowance for landscape treatment and should be updated with results from the civil design modelling during the concept design.

- **Wetland outlet** – Each wetland cell will have a modified circular scruffy dome manhole as an outlet. A simple adjustable weir will be formed in the outlet wall with the scruffy dome providing overflow capacity. A low-level pipe with a cap will be advisable, to enable drawing down of the outlet pool for maintenance to a level equal to the outlet pipe invert.

  It is expected that discharging the northern cell through the southern cell outlet structure will be a cost-effective approach. The outlet pipe back to the existing stormwater pipe will need backflow prevention to avoid flooding of the wetland in storms less than the intended spill level. It can be

graded to match the existing pipe level and graded back to the wetland outlet structures. A new manhole will be required in the existing stormwater pipe to allow the connection of the wetland outlet.

- **Overflows** – An overflow from the swale back into the wetland is proposed to enable the volume above the wetland operating level to be used for flood storage. This weir could be a simple concrete plinth with a timber crest set near to the existing swale top level. The weir discharges would flow over the wetland outfall access track, unless the track were realigned to the north side of the facility at additional cost. The length and level of the weir needs to be confirmed at a later design stage in discussions with Council, depending on the desired flood reduction outcome.

  As discussed above this could be achieved via the first flush basin but would risk mixing the first flush waters with later, cleaner water. Some mixing will occur regardless but it should be minimised, where practicable. Further assessment on the necessity for an overflow will be made at concept design stage.

Other key features of the facility include:

- **Access track** – A 4.5m access track will be required along the south side of the facility to allow maintenance of existing and proposed structures, including the GPT and swale. Given space constraints the track will have turning heads rather than turning circles. Discussions with operations teams during concept design may identify a need for turning circles, however, risks of incident are reduced as there is no intention for recreational use of the space. Suitable safety protocols will be necessary.

  A gate at the street frontage will be required and should be located to avoid modification to the existing traffic calming road build outs. However, if modifications to the build outs was considered acceptable, then the access could be adjacent to the GPT, with more land made available for on sale.

- **Site buffer** – A buffer may be required about any excavations near to buildings on neighbouring properties to manage any increases in geotechnical risks. A notional 10m buffer has been allowed for at this stage when calculating the length of the facility. A geotechnical assessment will be needed during concept design to understand the potential geotechnical risks and associated mitigations. Alternatives, such as ground improvement are available if a buffer is ineffective or unacceptable.

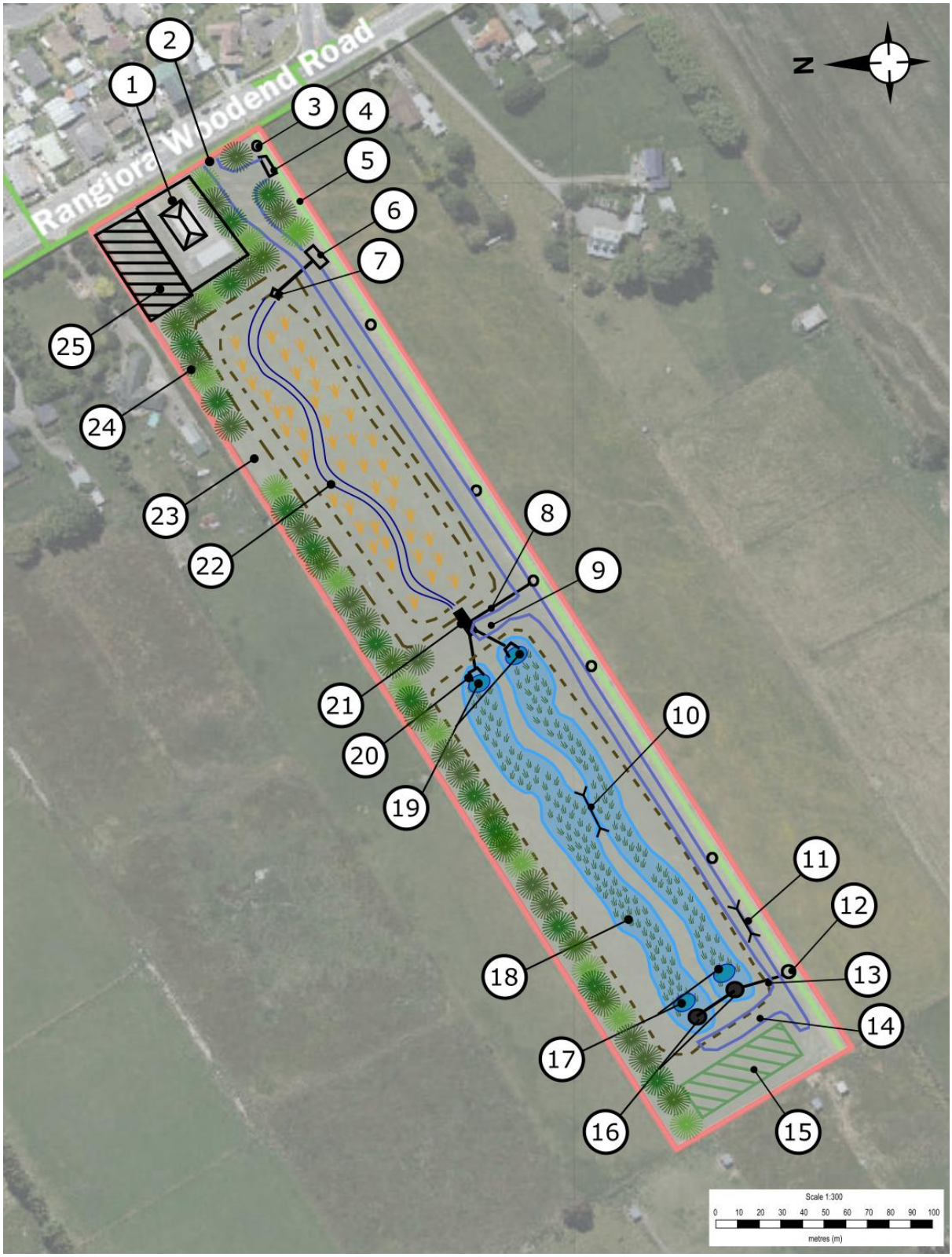
- **Cut to dispose offsite** – There may be insufficient area on site to manage all the cut material. Removal offsite will likely be required. Given that the PSI did not identify any contamination risks the material may be suitable for bulk fill on other projects (subject to testing) and have some value to developers.

- **Forest planting** – Any available land that is not required for access track or cut volume could be used for cultural, ecological and landscaping purposes. Any balance land furthest from the street frontage could be used for a variety of purposes.

- **On sale of street frontage** – Design of the access to the facility could be optimised to allow for maximum on sale of land. Consideration would need to be given to maintaining access to the site, screening of the site from the road and suitable turning areas for GPT access. Modifications to existing traffic calming features on Rangiora Woodend Road may be needed to maximise disposal of land.

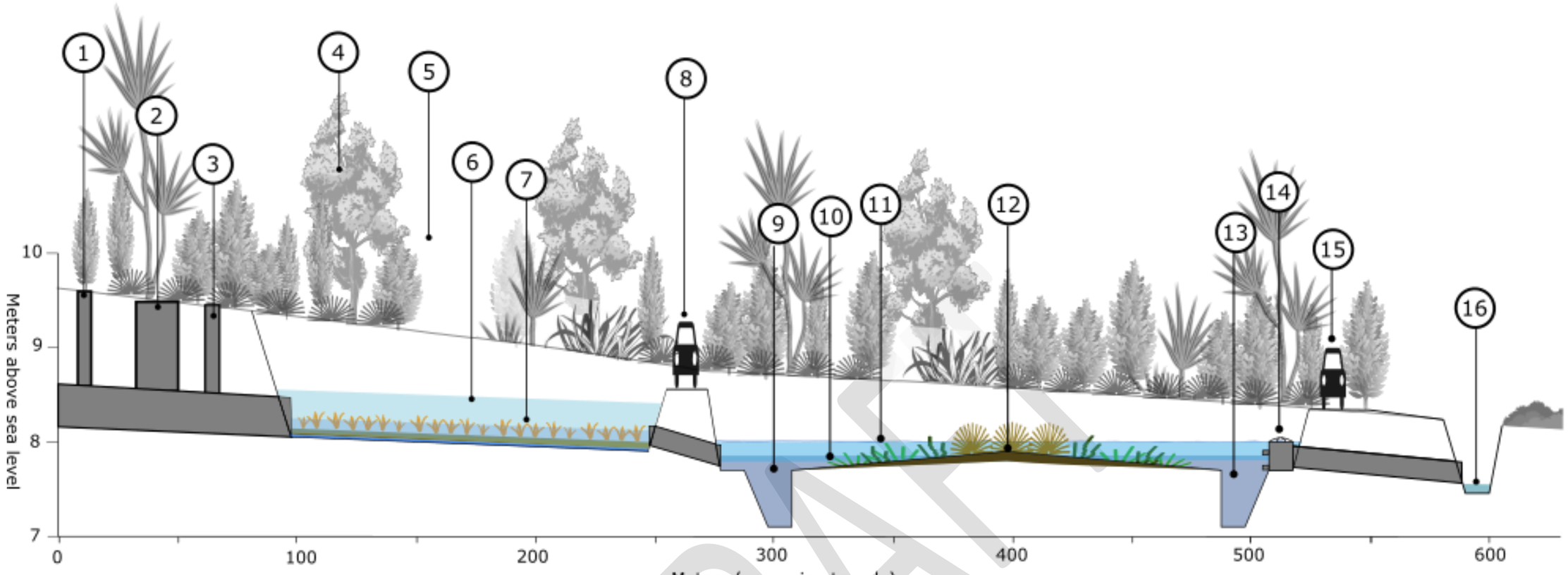
To illustrate potential future modifications to the design to account for some of the uncertainties identified in this report a second long section is provided in Appendix A.2, which shows the facility closer to the drain and lower by approximately 70-100mm. This could eventuate if, for example, a wider buffer between the basin cut face and the adjoining properties were required to manage geotechnical risk and the connection to the existing pipe will need to be further downstream. This could have flow on effects, such as, increased downstream maintenance, increased periods when drainage is impeded from the facility or reduced flood benefits to a greater or lesser degree.

Calculations used to support the design are provided in Appendix A.3.



1. Existing dwelling to remain
2. New access gate avoiding road buildouts
3. Overflow manhole
4. Existing GPT
5. Existing pipe, swale and subsoil drain
6. New flow splitting manhole
7. Cut pipe with rock headwall
8. Wetland bypass pipe to new manhole
9. Turning head and access to first flush basin outfall
10. Wetland cell overflow weir
11. Swale overflow to wetland if required
12. New manhole for wetland outfall
13. Wetland outlet pipe with backflow prevention
14. Maintenance access track with tunring head
15. Balance land for forest planting (TBD)
16. Scruffy dome wetland outlet manholes with weir in manhole wall
17. Wetland outlet pools
18. Number and shape of wetland cells to be confirmed at concept design
19. Inlet pools
20. Standard pipe headwall
21. Standard first flush outlet screen
22. Ephemeral first flush basin with low flow channel
23. Gap left to allow for future connection to first flush basin
24. Dense planting to reduce risk of insect nuisance
25. Potential balance land for sale or alternative use

Figure 5-1 Proposed system arrangement and key features



1. Existing overflow manhole
2. Existing gross pollutant trap
3. New flow splitting manhole (IL ~8.1 mRL)
4. Dense native planting
5. Gap in plantings to allow future connection to first flush basin
6. Ephemeral first flush wetland upper water level (U/S ~8.5 RL, D/S ~8.4 RL)
7. Ephemeral first flush wetland with low flow channel (U/S IL ~8.0m RL, D/S IL ~7.9m RL)
8. Turning head and access to first flush basin
9. Wetland inlet pool (IL ~7.2m RL)
10. Wetland permanent water level (~7.85m RL)
11. Wetland upper water level (~8.0m RL)
12. High spot in wetland to allow plant variety (~7.85 RL)
13. Wetland outlet pool (IL ~7.2 RL)
14. Wetland outlet structure with scruffy dome (Weir level ~7.85m RL, overflow ~8.0m RL)
15. Turning head and access to outlet structure
16. Existing drain at west of property (IL ~7.3m RL)

Figure 5-2 Proposed system long section

5.2 Implications of the groundwater investigation

The WSP report indicates that winter groundwater levels will be above the existing subsoil drain and above the proposed treatment system invert. This will result in groundwater inflows into the system during winter, which WSP have modelled to be in the order of 1 l/s or 49 m^3/d. The design of the first flush basin is for a peak discharge of 17 l/s and a total volume of 4,550 m^3. This could be a maximum of 200 m^3 over the 4 day draw down period or 4%, well within the certainty of the hydrological estimation. The additional groundwater inflow can be accounted for during the concept design of the facility but it will not materially alter the basin footprint. Allowing for flexibility in the outlet structure will be the best way to manage this risk operationally.

The same is true for the wetland design, which will need to increase in volume by the same 4% to account for the increased first flush basin discharge. This increases the wetland volume from 12,900 m^3 to 13,400m^3.

The increased volumes of first flush basin and wetland are considered in the cost estimates.

The alternative would be to install a subsoil drain in the design around the north side of the facility, however this is not recommended as the groundwater inflows can be accommodated through the sizing of the facility and including a pipe would require ongoing maintenance. Allowing for the groundwater inflows in the sizing the facility is a marginal increase in footprint and excavation volume. However, including the subsoil drain in the design would help reduce uncertainties with future groundwater conditions due to factors highlighted in the hydrogeological report:

> *Future changes such as climate change, reduced groundwater abstraction, and modifications to the open channel network could alter groundwater dynamics.*

WSP note that the drain water levels will need to be maintained below the wetland invert level to enable the site to drain. This cannot be controlled through the design of a gravity based facility and will require ongoing maintenance of the downstream drainage network to a similar level as what is undertaken today. The water levels observed during this winter (approximately 7.5m RL) should allow the system to function. A reduction in maintenance downstream could have adverse effects on the proposed system operation.

5.3 Implications of the hydraulic modelling investigation

The modelling clearly shows that the overland flow spilling out of the drain downstream of the facility acts as something of a flood level control, meaning that there is less difference between extreme events with increasing magnitude than might otherwise be expected. For example, the water levels upstream of the GPT vary by approximately 100mm between the 1 in 5 year 2hr event and the 1 in 200 year 2hr event in the current infrastructure scenario. As the proposed facility provides storage, the downstream flood depths are reduced. Up to the 200 year 2 hr event these reduced levels are below the activation level of this overland flow path as compared to the existing infrastructure scenario.

The modelling will have to be refined as the design develops. The initial sizing of the structures within the facility indicate that water is being retained for durations longer than 4 days in the system, which could cause some impacts on vegetation. Planting of the base of the first flush basin will minimise these risks but some attention will need to be given to the duration of water depths ponding in the first flush basin during the next design stage. Dropping water levels to below 100mm of the control structure inverts within 4 days by increasing the size of the basin outlet orifice will be desirable. Increasing pass through flows will reduce potential flood reduction benefits.

5.4 Maintenance

The facility will need to be kept offline until the plants are well established to avoid plant losses. A 24-month defects notification period would be suitable for this period. Ongoing maintenance will involve several key tasks:

1. Inspection and cleaning of the GPT: this is a key element in protecting the first flush basin. The GPT is proposed to be kept, however, upgrade options could be considered at the next design phase
2. Inspection of control structures: the structures will, by necessity, have small openings. These could become partially or completely blocked with vegetation and so will need to be inspected regularly. Design features will reduce but not eliminate this risk. The backflow prevention devices will also need inspection and occasional proactive maintenance

3. Fish exclusion: there is a possibility of fish becoming isolated in the wetland pools. The pools will need to be checked occasionally for fish. Fish exclusion will be materially achieved through outfall structure design with inclusion of backflow preventions, however, this alone will not prevent all species entering the facility. Given the limited fall through the system it is unlikely that a perched outfall could be designed
4. Low flow levels: some adjustment to the system will be necessary after construction to allow for variances in inflows and design assumptions. This could involve minor modifications to levels / opening / orifice diameters though adjustments to orifice plates, notched weirs, etc. This should occur after a period of operation, and, for maximum treatment efficiency be adjusted seasonally
5. Weed growth: nuisance weeds (aquatic and terrestrial) will be problematic until the landscape planting provides sufficient ground coverage. Some weed / algae growth can be expected in low flow channels and inlet / outlet pools. This may only be of concern if structures are becoming impeded. Weeds could also overgrow the access track. The width of the track can be oversized to allow for some of this growth
6. Mowing: any grassed areas will need mowing

The key risk for ongoing operation is the water level in the drain downstream. If these levels rise the drainage of groundwater will become impeded, creating risks with vegetation die back in the facility and with reduced treatment effectiveness. Maintenance of the downstream channel over time will be important.

Including telemetered water level sensors within the facility could reduce the need for visiting the site.

6 Evaluation of cultural values

To ensure the project supports the expectations and aspirations of Ngāi Tūāhuriri Rūnanga a two-tier approach has been undertaken. The first tier is an assessment against the values and outcomes set by the Ngāi Tūāhuriri representative during the Project Control Group values, vision and objectives workshop. These objectives are identified in Table 2-1 above and discussed in Table 6-1 below that identifies which part of the design gives effect to these objectives.

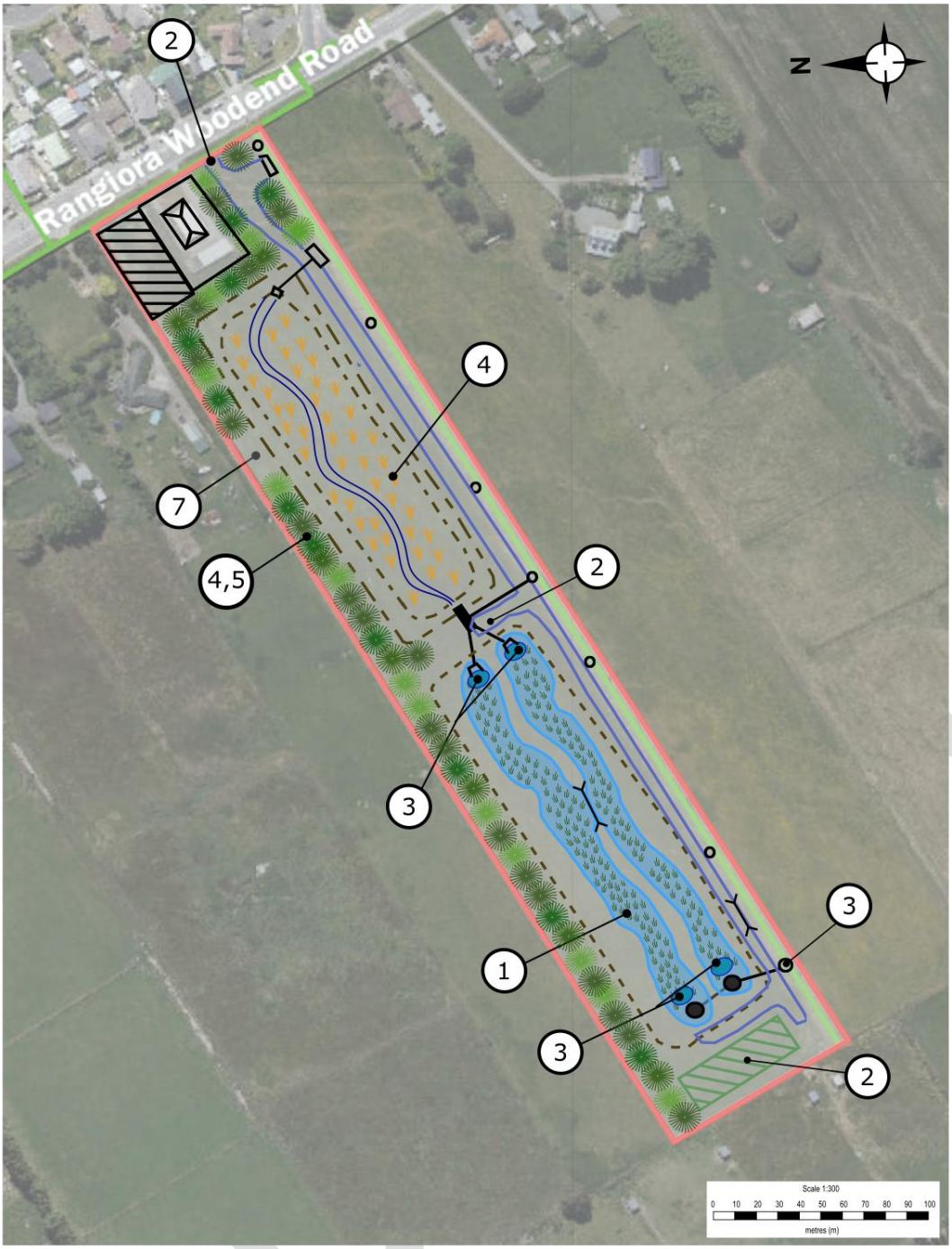


Figure 6-1 Site schematic identifying where mana whenua objectives have been implemented into the design. The numbers correspond to the objectives listed in Table 2

Table 6-1 Objectives identified by Ngāi Tūāhuriri representative during the values, vison and objectives workshop

#	Objective	Implementation
1	Land restoration in accordance with the black maps	The selection of an ephemeral wetland first flush basin followed by a surface water wetland aligns with the Canterbury Black Maps, with the lower half of the site likely to contain wetlands historically. The landcover of the upper half of the site is noted as herbaceous (mixed) and therefore planting with open scrubland plants would be appropriate

2	Support customary use, but do not encourage recreation on site	Public access is not planned for the site, rather a maintenance access track will be installed, which may be utilised by mana whenua to access the site for customary purposes. Screening of the site from the road with dense vegetation could reduce public interest in the site. Signage should be avoided Additionally balance land could be utilised for customary purposes (e.g. pā harakeke)
3	Support downstream restoration of mahinga kai and ensure fish passage needs are met	To protect the aquatic environment and ensure separation from stormwater contaminants the facility has not been designed for fish ingress. However, the inlet and outlet pools are of sufficient depth to act as refuge if aquatic species enter the facility (particularly tuna) and periodic maintenance will include checking the pools for stranded fish . Outlet pipes will also have backflow prevention devices installed, which limit ingress, but allow egress
4	Promote bird species recovery through habitat restoration	The first flush basin and wetlands will have a variety of depths, providing suitable habitat for wading and diving birds. Plant selection of forested areas will take into account flowering times to ensure a food source for nectar feeding birds and insect populations will provide a food source for insectivore birds
5	Ensure facility does not create a nuisance insect issue	Dense plantings of native species around the perimeter of the site will provide a screening effect reducing the number on insects leaving site. Additionally, these plantings will provide habitat to birds which will reduce the nuisance insect population
6	Provide water quality and quantity management to reduce burden on downstream habitat and sites of significance	The selected preferred option to be carried through to concept design of an ephemeral first flush basin followed by a treatment wetland meets this objective
7	Ensure facility has capacity to support further development in the catchment	During concept design a decision on any balance land needs to be made, with an option to increase the facility size to account for increased development Landscaping along the northern edge of the facility will allow for additional connections into first flush basin if development occurs to the north of the facility

A second-tier assessment has also been undertaken ensuring the project is consistent with the values and objectives as outlined in the policies within the Mahaanui Iwi Management Plan (IMP). Analysis of the project against the IMP is shown below in Table 6-2.

Table 6-2 Assessment of the proposed design against the Iwi Management Plan

Iwi Management Plan Policy	Assessment
P6.1 (d) *Discharge to land based methods*, including swales, stormwater basins, retention basins, and constructed wetponds and wetlands (environmental infrastructure), using appropriate native plant species, recognising	The proposed design uses a land-based method to treat stormwater and is therefore consistent with this policy. Other work undertaken outside of the scope of this project gives effect to P6.1 (a-c) (education, reducing volume entering system, reducing contaminants and sediment loads entering the system)

the ability of particular species to absorb water and filter waste.	
P6.2 To oppose the use of existing natural waterways and wetlands, and drains, for the treatment and discharge of stormwater in both urban and rural environments.	Stormwater will be treated through a constructed wetland prior to discharge to a natural waterway and therefore the proposed design is consistent with this policy
P6.3 Stormwater should not enter the wastewater reticulation system in existing urban environments.	Stormwater detention in the proposed facility will reduce upstream flooding and therefore the potential for stormwater to enter the wastewater system. The proposed design is therefore consistent with this policy
P6.4 To require that the incremental and cumulative effects of stormwater discharge are recognised and provided for in local authority planning and assessments.	The contaminants discharged from Box Drain at present are below the environmental level of concern and therefore do not have an acute impact on the receiving project. This project therefore recognises the cumulative impact that stormwater discharges may have on the receiving environment and therefore is consistent with this policy
P6.5 To encourage the design of stormwater management systems in urban and semi urban environments to provide for multiple uses: for example, stormwater management infrastructure as part of an open space network that provides for recreation, habitat and customary use values.	The proposed design will provide habitat as well as spaces for customary use and is therefore consistent with this policy
P6.6 To support integrated catchment management plans (ICMP) as a tool to manage stormwater and the effects of land use change and development on the environment and tāngata whenua values, when these plans are consistent with Policies P6.1 to P6.4.	This policy is not relevant to the project
P6.7 To oppose the use of global consents for stormwater discharges.	This policy is not relevant to the project

The above assessments demonstrate that the proposed design is consistent and gives effect to previously expressed objectives and policies of Ngāi Tūāhuriri.

7 Cost estimate

An outline construction cost estimate has been prepared by a quantity surveyor (QS solutions) based upon the feasibility design. The estimated construction cost is approximately $1.42M +/- 30%. The detail of the estimate is provided in Appendix A.1. Careful note should be taken of the assumptions and exclusions. Notably, the estimate assumes that any cut can be managed on site or will not incur a cost for removal off site, as it could be desirable for use as bulk fill in other projects. Given the site constraints it is unlikely that disposal of all the material on site will be feasible. In considering project budget additional allowances should be made for client-side costs and scope risks.

8 Risks and opportunities

8.1 Risks

The key project risks and management approaches are provided below:

- **Geotechnical** – It has been assumed in cost estimate that ground improvement is not required and any offset to the boundary required to avoid and adverse impacts on neighbouring properties can be managed without significantly encroaching on the available space for excavating the facility. Other geotechnical risks associated with static stability, running sands, dispersive soils, foundation requirements, organic materials, soils reuse etc have not been explored at this stage and could present cost risks
  Management approach – undertake geotechnical investigations and consider mitigation measures at concept design phase
- **Box Drain water levels** – As identified by WSP, the facility will not be able to drain if the tailwater levels are too high. Water level monitoring has shown that drain levels can rise significantly during storms and past water marks indicate periods of high tailwater
  Management approach – the proposed system is designed as 'flat' and as elevated as possible without requiring pumping to limit the periods where outfall levels are impeded. Sufficient fall will be required to provide internal drainage. Ongoing maintenance of the drain downstream will be critical to ensuring effective system operation
- **Consenting risks –** The consenting of the facility may present some programme challenges.
  Management approach – WDC are leading the consenting of the facility and have the best knowledge of the local consenting environment. Council have advised that:
  - Obtain consent for the estimated required groundwater volumes should be possible. The conditions of the consent will depend on the rate of take.
  - Keeping the incidental interception of groundwater to below 5l/s will mean the water metering regulations will not be mandatory for this groundwater take. If you have a permit that allows 5 l/s or more to be taken, a water meter needs to be installed at every point of take. Keeping the incidental interception of groundwater to below 5l/s will mean the water metering regulations will not be mandatory for this groundwater take.
  - The SMA will be located in the Ashley Groundwater allocation zone.

  ECan established in 2003 that the Ashley groundwater zone was 87% allocated, indicating that, "[*WDC*] should be able to obtain consent for these required volumes." The remaining allocation in the zone is 13,695,489 m^3/yr. If the facility were to drain 49m^3/d (as estimated in the WSP Hydrogeology report), every day of the year, this would represent only 17,885 m3/yr or 1.3% of the allocation remaining in the 2003 estimate and would be well below the 5l/s threshold for water metering regulations.
- **Nuisance insects** – There is a risk of insects becoming a nuisance to neighbours
  Management approach – birds will naturally prey on the insects and providing a buffer of dense vegetation adjoining the properties will discourage insects
- **Inflow variability** – There is a risk that groundwater inflows are greater than expected or higher than expected. There is also a risk that operational water levels vary from the design due to inherent variability in the system, future catchment changes, or inaccuracies in the design or construction
  Management approach – Allow for flexibility in the design of structures, for example, make weirs adjustable, orifice plates removable, setting water level controls above the floor of structures
- **Sediment discharge from the facility** – Experience has shown that some finer in situ soil types can be dispersive and release sediment when exposed to water in a treatment facility
  Management approach – Test if in situ soils are dispersive during concept design stage as part of geotechnical investigations and consider use of pea gravel on base of system
- **Poor plant establishment** – Poor plant establishment can occur if there is too much water in the system in the first year after planting. Some additional planting may be required about the site depending on the level and location of groundwater seepages into the system
  Management approach – Plant the wetland in spring. Keep the system offline for at least the first 12 months while the plants establish. Include a wetland bypass pipe from the first flush basin structure to allow the upstream half of the wetland to drain back towards the existing pipe during establishment

- **Cost risk** – The quantity surveyor identified several risks and assumptions in preparation of the project estimate. These will need further consideration in subsequent design stages, and it would be appropriate to set aside budget provision to account for these items
  Management approach – Further assess risks during concept design and later design stages. Identify need to make budgetary provisions for risk provisions and client scope risk
- **Available land** – The current design process has not included development of a civil design model. This will be prepared at the concept design stage. This may highlight the need for more space and any balance land may be reduced. This could be exacerbated by the geotechnical risk described above and the need to account for other design requirement not yet identified
  Management approach – As no more land will be made available to the project, the facility will have to be sized as efficiently as possible, with some compromise made on water quality outcomes, if necessary
- **Groundwater** – The WSP team have identified three risks with moderate residual risk that will need to be considered through subsequent stages:
  - Inability to gain resource consent due to groundwater take
  - May be difficult to dewater during construction due to high water table
  - Multiple design iterations and additional groundwater modelling may be required beyond the agreed scope

  Management approach: Design facility to minimise excavations and engage with the WSP team during design.

8.2 Opportunities

There are some opportunities that could be explored further:

- **Balance land** – More land could be made available for resale if the traffic calming road build outs were modified to enable the maintenance access nearer to the GPT. Alternatively, an easement over the access could be retained. Required turning circles and Council appetite for works in the road corridor can be explored during the concept design phase
- **Further groundwater modelling** – Refining groundwater estimates by modelling a timeseries treatment system water level within the hydrogeological model. However, given the relatively small contribution from groundwater inputs modelled to date makes this a small opportunity
- **Disposal of cut material** – The cut material may be suitable as bulk fill material for other projects, such as land development. It may be possible to 'sell' the material in situ with the cost of the material being the excavation of it, or similar. Whilst outside of the scope of the design, this could present an opportunity to reduce costs as the current cost estimate allows for excavation but not carting off site or disposal

9 Conclusions

The further investigations undertaken following the options assessment have been favourable. Groundwater potential inflows are small compared to stormwater treatment flow and can easily be accounted for in the system design. Hydraulic modelling of the proposed system highlighted flood reduction benefits and effective drawdown of the system in the water quality event, although this will need further refinement at concept design. An initial assessment of consentability undertaken by WDC did not highlight significant concerns but highlighted the advantages of keeping any groundwater interception below 5 l/s to avoid the need for water metering.

The cost estimate prepared for the project has uncertainty, given the current stage of design. Approximately $1.42M +/- 30% is estimated to design and construct the facility, noting the exclusions and assumptions. Additional budget should be set aside in addition for management of risks and exclusions noted in the estimate, and for client side costs and scope risk.

Overall, the proposed system is considered feasible, but not without risk. Progressing to concept design phase will enable design refinement and further risk evaluation. Council internal investigations have identified that it is likely that the system will be able to be consented based upon the WSP estimation of groundwater take.

10 Next Steps

The proposed next step is to progress the design to the concept stage. The key activities in this stage are:

- Geotech study – to establish static and dynamic stability risks with suitable mitigations, foundation requirements, geotechnical risks, presence of dispersive soils. This work will inform a number of project outcomes, including potential boundary offsets, finishing of cut surfaces, safety in design, etc
- Refining hydraulic design through modelling – to confirm structure sizing and key hydraulic features
- Landscape design – to facilitate a discussion with mana whenua on the project
- Civil design model – to confirm the footprint of the facility and access requirements
- O&M manual – preparation of an outline O&M manual to inform consenting
- Cost estimate
- Drawings
- Preparation and submission of resource consent application

The scope of later design stages will include: structural design, roading design, contract drawings (IFT and IFC), specification and other contract documents, material selection, detailed planting plans, and other matters.

A.1 COST ESTIMATE

Project Cost Estimate - Box Drain Treatment Facility

Prepared by: Laco Yan (QS Solutions)

Date: 6 August 2025

Level of Estimation: Feasibility Study Estimate

- This is a full project cost estimate based on the Feasibility Study report.
- The scope of work is to build a stormwater infrastructure, with first flush basin and wetland.
- Accuracy of Estimation: - 30% - + 30% * Key assumptions applied to this estimate

Basis of Estimation:

- Feasibility Study and Take off from engineer.
- Tender price from similar recent work.

General Assumptions

- Measurements are subject to the sketch being accepted. Some measurements, dimensions, and quantity of work are approximate.
- The work is based on a desk study and GIS measurement; the quantity of work may be refined after a site survey and further design work.
- The estimates assume continuity of work and unobstructed access to the site.
- Estimate assumes that the project will be procured as a traditional, competitive tender with at least three suitable tenderers
- Contingency to construction is calculated based on the assessment of each detail work. No detailed risk analysis has been carried out.

General Exclusion

- Goods and Services Tax
- Council Reserves and Development Contribution
- Legal and Accounting service fee
- Foreign exchange rate fluctuation beyond the date of the estimation
- Fast track or acceleration cost
- Land purchase or easement

Specific Assumptions and Exclusions

- The estimation assumes there is enough corridor for the construction work.
- No allowance is made to shift or relocate any existing services.
- No allowance is made on any delay or cost impact from archaeological investigation or management work.
- Earthwork balance onsite or free disposal offsite. No allowance for cart or disposal offsite.
- No allowance is made for easement, land purchase or any legal or property team on easement.
- No allowance for inflation, cost are current as of the date of this commission.
- No allowance on contamination / hail site. Dewatering can discharge to the open drain.

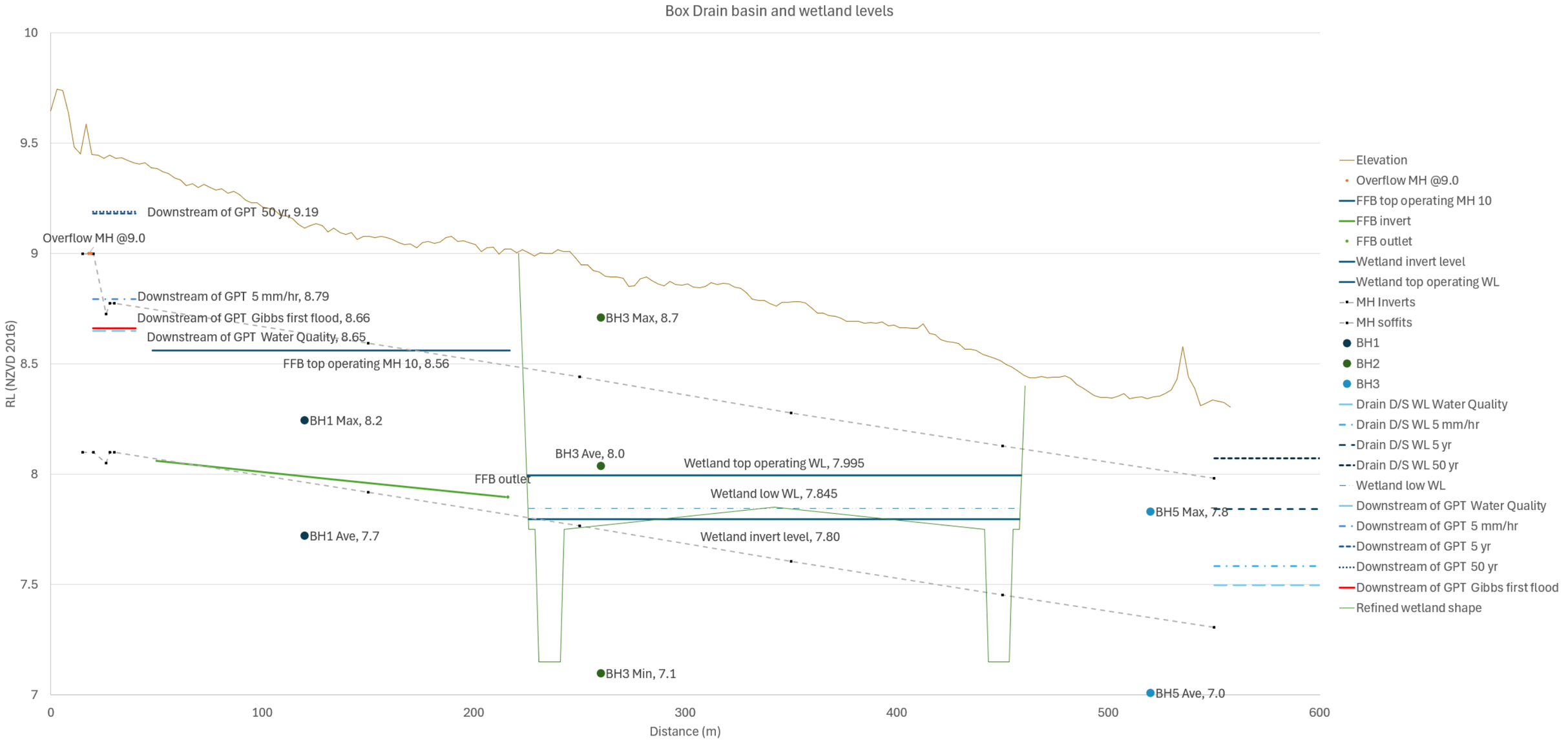
Box Drain Stormwater Treatment Facility	
Project Description:	Waimakariri District Council ("Council") is considering a stormwater treatment facility on Box Drain, which collects flows from part of the existing urban area of Woodend. The preferred option is an offline first flush basin and wetland. The drain is of significance to local mana whenua as it discharges into Tuahiwi Stream, and is located within Kaiapoi Māori Reserve MR873, and ultimately enters Ruataniwha awa (Cam River).
Site description	Open greenfield condition High groundwater observed on site Clean site Works to avoid dwelling at street frontage No utilities on site or service relocations required
Background notes:	**Risks:** - Elevated GW during construction necessitates dewatering - Geotechnical design not yet established (assume no ground improvement) - Variable ground conditions vary - Hydraulic modelling requires upstream pipe upgrades (assume not required for this pricing exercise) - Landscape planting expectations change **Design Notes:** - No recreational features (i.e. no boardwalks, paths or other hard landscaping) - Typical 4m wide access track beside overflow swale and down to outlet pipe - More trees than usual required to meet Mana Whenua expectations

ITEM	Description	Unit	Quantity	Unit Rate	Total
General					
Site establishment and disestablishment		LS	1	$30,000.00	$30,000.00
Pre-start docs / consent compliance / as-builts / ESCMP		LS	1	$5,000.00	$5,000.00
Fencing / signage		LS	1	$10,000.00	$10,000.00
Site investigations / potholing		LS	1	$3,000.00	$3,000.00
Stockpile management		LS	1	$5,000.00	$5,000.00
				Sub-Total	**$53,000.00**
General earthworks					
Site Clerance and vegetation stripping	Strip 130mm to stockpile	m^2	35,107	$1.20	$42,128.26
Strip topsoil	Strip topsoil to a nominal 200mm depth to stockpile	m^2	35,107	$2.10	$73,724.45
				Sub-Total	**$115,852.70**
Pipe network and structures					
DN1800 Manhole	In greenfield, depth approx. 1.5m to base of MH, with 300mm gravel raft break into existing pipe, internal adjustable overflow weir and stoplogs	No	1	$25,000.00	$25,000.00
DN700 RCRRJ Pipe FFB Inlet pipework	In greenfield, depth less than 1.5m to invert of pipe	m	20	$1,050.00	$21,000.00
Cut pipe headwall with rock surround	As per CSS	No	1	$2,500.00	$2,500.00
FFB Outlet	CCC outfall standard detail with orifice plate, stoplogs, bypass outlet and two continuation pipes Depth approx. 1.3m to base of structure, with 300mm gravel raft	No	1	$23,500.00	$23,500.00
DN700 RCRRJ Pipe FFB -> Ex. Pipe Wetland Bypass	In greenfield, depth approx. 1.3m to invert of pipe	m	20	$1,050.00	$21,000.00
DN375 RCRRJ Pipe FFB -> Wetland cells	3x FFB outfall pipes In greenfield, depth less than 1.5m to invert of pipe Concrete wing wall outfalls into wetland pool	m	75	$460.00	$34,500.00
DN1200 Manhole with scruffy dome lid	Bespoke adjustable steel notch weir with low flow bypass Depth approx. 1.3m to base of structure, with 300mm gravel raft	No	1	$20,000.00	$20,000.00
DN450 RCRRJ Pipe Wetland outfall -> Ex. Pipe	In greenfield, depth approx. 1.3m to invert of pipe	m	60	$530.00	$31,800.00

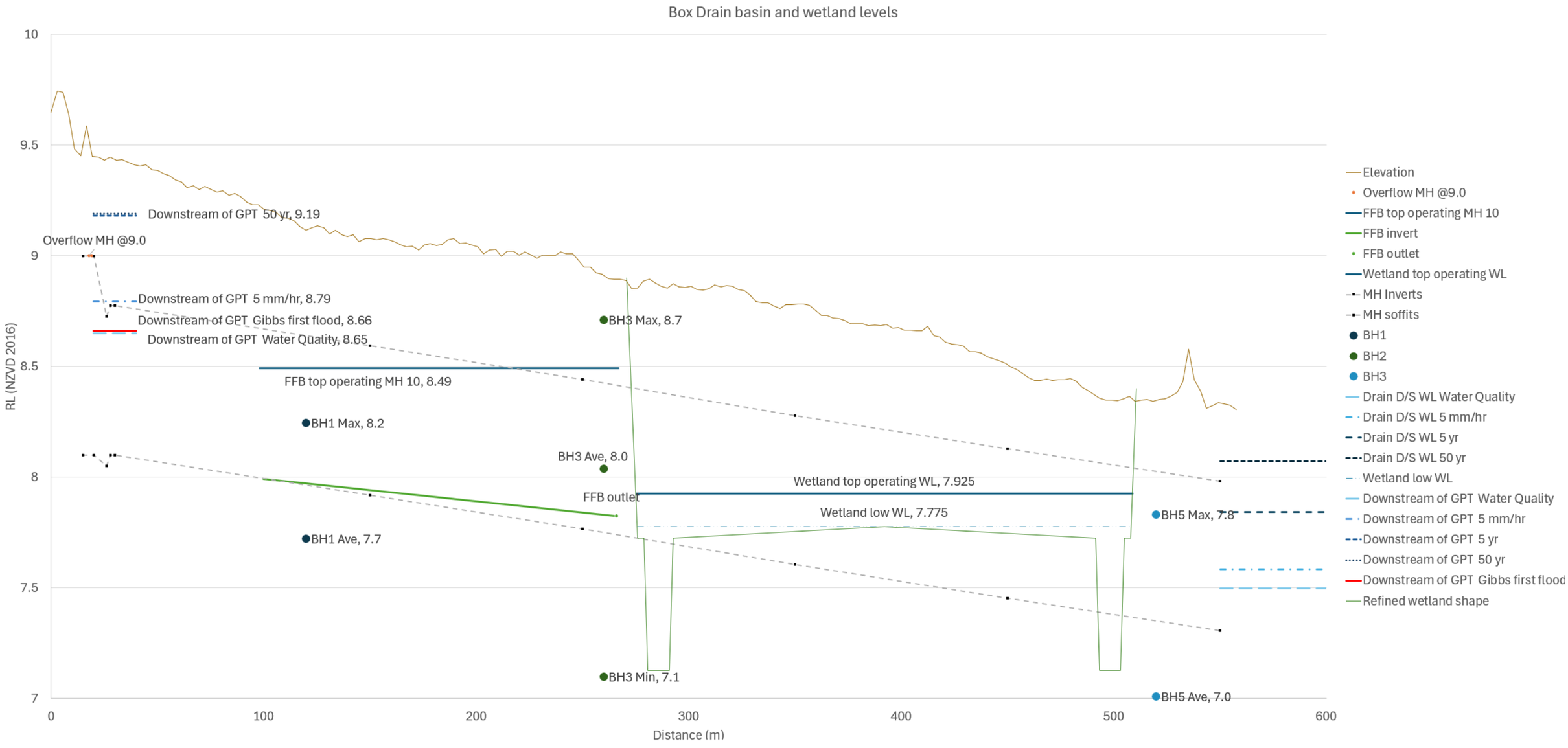
DN1800 Manhole	In greenfield, depth approx. 1.5m to base of MH, with 300mm gravel raft break into existing pipe, backflow prevention on WL outlet pipe	No	1	$25,000.00	$25,000.00
				Sub-Total	**$204,300.00**
First flush basin					
First Flush detention basin Earthworks	Indicative total excavation required to achieve 4,550 m3 first flush storage. Earthworks will include excavation below existing ground level by 1.2m with 1:4 side slopes	m^3	12,697	$20.00	$253,936.32
Planting and reinstatement	The storage basin will be an ephemeral wetland and planted with suitable wetland reeds and plants.	m^2	10,500	$13.00	$136,500.00
				Sub-Total	**$390,436.32**
Wetland					
Wetland Earthworks	Indicative total excavation required to achieve 12,900 m3 wetland volume. Earthworks will include excavation below existing ground level by 1.2m with 1:4 side slopes	m^3	20,402	$20.00	$408,038.40
Planting and reinstatement	The wetland will be planted with suitable wetland reeds and plants	m^2	16,500	$13.00	$214,500.00
				Sub-Total	**$622,538.40**
Maintenance Access and Ancillaries					
Access track	4m wide grit path, rated for 21t sucker truck	No	550	$100.00	$55,000.00
DN450 Flap gate on wetland outlet	Standard flap gate	No	1	$3,500.00	$3,500.00
Water level monitor installation	Assume installation in manholes, cell network telemetry with power required to site. Cable lay approx. 450m. Assume power available at Rangiora Woodend Rd	LS	2	$20,000.00	$40,000.00
General Planting about site	Account for many trees / 8433m2, allow 800 trees and 4500 x Rx90	m^2	8,433	$16.00	$134,929.92
Drop kerb and permanent site access with gate	New dropped kerb with road reinstatement to C1, standard access gate	LS	1	$4,500.00	$4,500.00
Swale overflow weir	10m long overflow weir from swale back to wetland, reinforced grass sides, concrete weir with timber weir cap	LS	1	$5,000.00	$5,000.00
				Sub-Total	**$242,929.92**
				Construction Direct	**$837,666.24**
Contractor Preliminary and General					
Contractor P&G	Local consideration, Greenfield, Earthwork and landscape - 18% excluded allowance under General	%	18		**$97,779.92**
				Construction Subtotal	**$935,446.16**
Professional Services					
Investigation	1.5% of Construction Cost (where applicable)	%	935,446	1.5	$14,031.69
Design	7.5% - Includes all investigations and detailed design (resource & building)	%	935,446	7.5	$70,158.46
Onsite supervision / CMCA	5% of Construction Cost (where applicable)	%	935,446	5	$46,772.31
Ecologist / Mana Whenua Involvement		LS	1	$7,500.00	$7,500.00
Consent		LS	1	$15,000.00	$15,000.00
Project Management	2.5% of Construction Cost (where applicable)	%	935,446	2.5	$23,386.15
				Professional Services Subtotal	**$176,848.62**
Contingency					
Design	Feasibility Study Stage, with PSI and Geotech desktop study	%	10		$93,544.62
Construction	Standard Wetland work, within Greenfield, Low Risk	%	5		$46,772.31
Project Scope	Feasibility Stage	%	15		$166,844.22
				Contingency Subtotal	**$307,161.14**
Project Estimate, excludes Contingency, rounded					**$1,112,000.00**
Project Estimate, with Contingency, rounded					**$1,419,000.00**

A.2 SYSTEM OPERATIONAL LONG SECTIONS

1. Long section used to inform hydraulic and hydrogeological modelling



2. Modified long section to represent feasibility design uncertainty



A.3 DESIGN CALCULATIONS

Box Drain - Wetland - Hydraulics update

Wetland	Indicative sizing online
Flow rate (m^3/day)	1,330
Wetted area (ha)	1.77
Max width (m) (accounting for access)	73
Adjoining ground level (m)	9
Average water depth (m)	0.2
Peak water level (m)	8.24
Wetland average invert (m)	8.04
Side slope width (m)	3.86
Max base width (m)	65.28
Wetland minimum length (m)	272
Detention volume (m^3)	12,940
Total detention volume (m^3) FF + WL	17,490
Approximate total footprint + buffer (m^2) excl. dry cut depth	27244

Diversion weir calculation upstream of the facility

Rating curve for normal operating diversion weir

Assumptions:

1) Weir will consist of a 1.2m wide notch within a gate, fixed within a larger custom structure.
Flow over weir is calculated as a sharp crested weir as per equation 22-27 of the CCC WWDG below

$Q = B \times 1.8 H^{1.5}$ (m^3/s) Eqn (22-27)

2) Level H is relative to RL of weir notch

5 yr flow (approx)	520	L/s			
Weir Details					
RL at bottom of weir:			8.71	m	
RL at upstream overflow			8.66	m	
Width of weir			1.05	m	
Manhole dia			1.80		
Manhole circumference			5.65	m	
Swale overflow weir			1.26	m	
5hr flow rate			0.69	m3/s	0.62 modelled
WQF			0.03	m3/s	FFB orifice
Modelled bypass pipe flow at Gibbs drive first flood			0.373	m3/s	
Modelled WL in manhole DS GPT at peak 5yr Q			9.18		
Total bypass flow			0.67		
Max head before bypass			-0.05		
Weir crest			8.49	m	From model for first flooding upstream on Gibbs Drive

RL (m)	H Bypass wier (m)	Q bypass (m3/s)	RL scruffy dome overflow weir (m)	Q FFB overflow (m3/s)	Swale weir H (m)	Q Swale (m3/s)	Total Pipe ital bypass flow (m3/s)	(m3/s)	
8.66	0.17	0.130	0.17	0.701	0	0.000	0.831	0.83	Check that pipe can inlet current modelled flow at gibbs first flood
8.70	0.21	0.187	0.21	1.008	0	0.000	1.195	1.20	Check total 5 year flows less than current model level
									Note that these flows exceed pipe full flow so swale will activate

RL (m)	H Bypass wier (m)	Q bypass (m3/s)	RL scruffy dome overflow weir (m)	Q FFB overflow (m3/s)	Swale weir H (m)	Q Swale (m3/s)	Total Pipe ital bypass flow (m3/s)	(m3/s)
8.49	0.00	0.000	0.00	0.000	0	0.000	0.000	0.00
8.51	0.02	0.005	0.02	0.029	0	0.000	0.034	0.03
8.53	0.04	0.015	0.04	0.081	0	0.000	0.097	0.10
8.55	0.06	0.028	0.06	0.150	0	0.000	0.177	0.18
8.57	0.08	0.043	0.08	0.230	0	0.000	0.273	0.27
8.59	0.10	0.060	0.10	0.322	0.02	0.006	0.382	0.39
8.61	0.12	0.079	0.12	0.423	0.04	0.018	0.502	0.52
8.63	0.14	0.099	0.14	0.533	0.06	0.033	0.632	0.67
8.65	0.16	0.121	0.16	0.651	0.08	0.051	0.772	0.82
8.67	0.18	0.144	0.18	0.777	0.10	0.072	0.922	0.99
8.69	0.20	0.169	0.20	0.910	0.12	0.094	1.079	1.17
8.71	0.22	0.195	0.22	1.050	0.14	0.119	1.245	1.36
8.73	0.24	0.222	0.24	1.197	0.16	0.145	1.419	1.56
8.75	0.26	0.251	0.26	1.349	0.18	0.173	1.600	1.77
8.77	0.28	0.280	0.28	1.508	0.20	0.203	1.788	1.99
8.79	0.30	0.311	0.30	1.673	0.22	0.234	1.983	2.22
8.81	0.32	0.342	0.32	1.843	0.24	0.267	2.185	2.45
8.83	0.34	0.375	0.34	2.018	0.26	0.301	2.393	2.69
8.85	0.36	0.408	0.36	2.199	0.28	0.336	2.607	2.94
8.87	0.38	0.443	0.38	2.384	0.30	0.373	2.827	3.20
8.89	0.40	0.478	0.40	2.575	0.32	0.411	3.053	3.46
8.91	0.42	0.514	0.42	2.771	0.34	0.450	3.285	3.73
8.93	0.44	0.552	0.44	2.971	0.36	0.490	3.522	4.01
8.95	0.46	0.590	0.46	3.176	0.38	0.531	3.765	4.30
8.97	0.48	0.629	0.48	3.385	0.40	0.574	4.014	4.59
8.99	0.50	0.668	0.50	3.599	0.42	0.617	4.267	4.88

Calculation of Outflows Through First Flush Basin Outlet Orifice

Orifice equation

$Q_o = C_d A(2gh_o)^{1/2}$

Where

Q_o		m^3/s	Flow using orifice equation
C_d	0.61		Orifice equation discharge coefficent
A		m^2	Area of orifice
g	9.81	m/s^2	Gravity
h_o		m	Water height over orifice centreline

Water height:

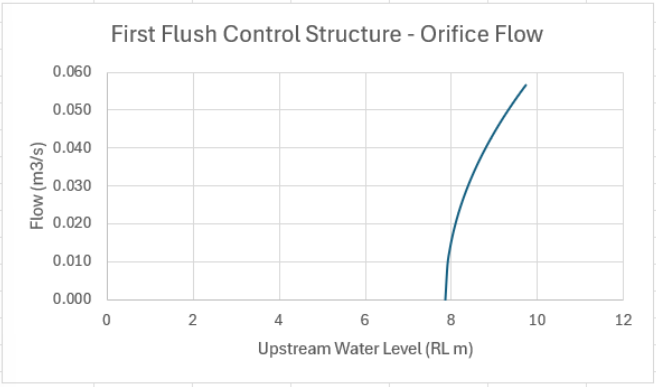
FFB invert	7.8	
=> head on orifice is upstream head minus orifice CL RL		

First Flush Volume	4550	m^3
groundwater inflow	49	m^3/d
Drain Down	4	days
=> Average flow	49	m^3/hr
	14	L/s
		(m3/s)

Orifice size:

Size orifice to give above outflow:

Diameter	140	mm
Area	0.0154	m^2



Flow Calculation

Water elevation (m	h_o (m)	A (m^2)	Q (m^3/s)	
7.87	0	0.0154	0.000	
7.92	0.05	0.0154	0.009	
7.97	0.1	0.0154	0.013	
8.02	0.15	0.0154	0.016	16.109
8.07	0.2	0.0154	0.019	
8.12	0.25	0.0154	0.021	
8.17	0.3	0.0154	0.023	
8.22	0.35	0.0154	0.025	
8.27	0.4	0.0154	0.026	
8.32	0.45	0.0154	0.028	
8.37	0.5	0.0154	0.029	
8.42	0.55	0.0154	0.031	
8.47	0.6	0.0154	0.032	
8.52	0.65	0.0154	0.034	
8.57	0.7	0.0154	0.035	
8.62	0.75	0.0154	0.036	
8.72	0.85	0.0154	0.038	
8.82	0.95	0.0154	0.041	
8.92	1.05	0.0154	0.043	
9.02	1.15	0.0154	0.045	
9.12	1.25	0.0154	0.047	
9.22	1.35	0.0154	0.048	
9.32	1.45	0.0154	0.050	
9.42	1.55	0.0154	0.052	
9.52	1.65	0.0154	0.053	
9.62	1.75	0.0154	0.055	
9.72	1.85	0.0154	0.057	

Rating curve for normal operating diversion weir

Assumptions:

1) Weir will consist of a 60mm wide notch

Flow over weir is calculated as a sharp crested weir as per equation trapezoidal weir cal

2) Level H is relative to RL of weir notch

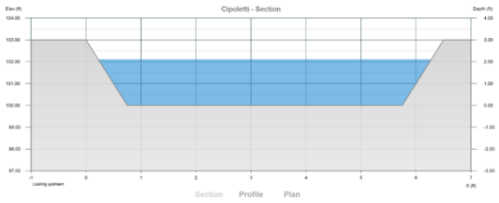
		1.83	Weir coefficient					
Water quality flow (appr		17	L/s					
Weir Details					Weir width	0.1320697		
					Weir depth	0.15	m	
	RL at bottom of weir:					8.085	m	
	RL at upstream overflow					8.235	m	
	Width of weir					2.30	m	
	Wetland invert					8.04	m	
Notch			Overflow			Combined flow		
H	**RL**	**Q**	**H**	**RL**	**Q**			0.15
(m)	**(m)**	**(m3/s)**	**(m)**	**(m)**	**(m3/s)**			
0	8.085	0				0.000		
0.01	8.095	0.000				0.000		
0.03	8.115	0.001				0.001		
0.05	8.135	0.003				0.003		
0.07	8.155	0.005				0.005		
0.09	8.175	0.007				0.007		
0.11	8.195	0.010				0.010		
0.13	8.215	0.013				0.013		
0.15	8.235	0.017	0.00	8.24	0.000	0.017	Wetland design flow	
0.17	8.255	0.021	0.02	8.26	0.012	0.033		
0.19	8.275		0.04	8.30	0.033	0.033		
0.21	8.295		0.06	8.36	0.061	0.061		
0.23	8.315		0.08	8.44	0.094	0.094		
0.25	8.335		0.10	8.54	0.131	0.131		
0.27	8.355		0.12	8.66	0.172	0.172		
0.29	8.375		0.14	8.80	0.217	0.217		
0.31	8.395		0.16	8.96	0.265	0.265		
0.33	8.415		0.18	9.14	0.316	0.316		
0.35	8.435		0.20	9.34	0.370	0.370		
0.37	8.455		0.22	9.56	0.427	0.427		
0.39	8.475		0.24	9.80	0.487	0.487		
0.41	8.495		0.26	10.06	0.549	0.549		
0.43	8.515		0.28	10.34	0.613	0.613		
0.45	8.535		0.29	10.63	0.647	0.647		
0.47	8.555		0.30	10.93	0.680	0.680		
0.49	8.575		0.32	11.25	0.749	0.749		
0.51	8.595		0.34	11.59	0.821	0.821		
0.53	8.615		0.36	11.95	0.894	0.894		
0.55	8.635		0.38	12.33	0.970	0.970		
0.57	8.655		0.40	12.73	1.047	1.047		
0.59	8.675		0.42	13.15	1.127	1.127		

Trapezoidal with Sloped Sides

Total flow over trapezoidal weirs with side slopes is computed using the standard weir equation as shown above, plus two times the flow given from the following equation.

$$Q = \frac{2}{5} C_w Z H^{2.5}$$

Where:
Q = discharge over side-sloped portion of weir, cfs (cms)
Z = side slope (Z horizontal to 1 vertical) of the weir crest
H = distance between water surface and the crest, ft (m)
Cw = weir coefficient, typically 3.367 (1.83)



Cipolletti weirs have .25 H to 1 V side slopes, Z = 0.25.

A.4 WSP HYDROGEOLOGICAL INVESTIGATION

Confidential

Waimakariri District Council
Box Drain - Hydrogeology Assessment

Groundwater Modelling for Stormwater Design Feasibility Assessment - Design 1

7 October 2025

3-C2673.00

Box Drain - Hydrogeology Assessment

Groundwater Modelling for Stormwater Design Feasibility Assessment - Design 1

Waimakariri District Council

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REV	DATE	DETAILS
0	07-08-2025	Draft for client review
1	15-08-2025	Updated addressing client comments – tracked-change version
2	07-10-2025	Final – tracked-change version

	NAME	DATE
Prepared by:	Eric van Nieuwkerk	07-10-2025
Reviewed by:	Katie Coluccio	07-10-2025
Approved by:	Tom Porter	07-10-2025

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TABLE OF CONTENTS

1 INTRODUCTION

1.1 GENERAL

Waimakariri District Council (WDC) is considering a stormwater treatment facility at an existing stormwater facility (Box Drain), at 65a Rangiora Woodend Road, Woodend. Box Drain collects flows from part of the existing urban area of Woodend. Short-term groundwater monitoring during the options assessment identified that groundwater levels are high, and groundwater ingress may compromise the hydraulic or water treatment performance of the stormwater facility. WDC has subsequently engaged WSP New Zealand Limited (WSP) to provide hydrogeological advice in support of the design of the proposed stormwater treatment facility comprising an offline first flush basin and wetland at Box Drain.

1.2 SCOPE OF THIS REPORT

WSP has completed Stage 1 and 2 of the Box Drain – Hydrogeology Investigations, which entailed a desktop study of the groundwater and geological conditions of the site, field investigations to test soil hydraulic conductivities and undertake groundwater and surface water level monitoring, and an indicative assessment of potential inflows to the proposed stormwater facility. The results of Stage 1 and 2 are documented in WSP (2025).

This report describes the results of Stage 3 of the project, in which WSP developed a 3D-numerical groundwater model of the site and surrounding area to assess the following:

- Potential groundwater inflows into the treatment system that could influence treatment efficiency.
- Elevated groundwater levels impeding drainage from the proposed facility and potentially leading to poor facility outcomes.
- The frequency and duration of elevated groundwater as well as likely heights.

A range of possible invert levels of the stormwater facility may need to be considered. This report sets out the results for an option referred to as ‘Design 1’, as provided by Storm Environmental on 26 June 2025. The results documented in this report are intended to provide information to support the feasibility assessment of this Design 1 by Storm Environmental. If further assessments of design options are required, these will be documented in separate reports.

The model can also be used to assess any potential impacts of the proposed system on the existing environment for consenting purposes, such as on:

- Nearby surface water takes due to groundwater intake.
- Nearby groundwater abstraction, considering interception of groundwater flow and water quality.

However, the Box Drain stormwater treatment facility design is in the feasibility assessment stage and no concept design is yet available. A concept design is required for the assessment of potential effects in support of a resource consent application. The effects assessment will therefore be completed at a later stage when the concept design is confirmed.

1.3 APPROACH

For this assessment, WSP developed the Box Drain numerical groundwater model constructed and run using the Groundwater Vistas V9 modelling package. Groundwater Vistas was developed by Environmental Simulations Inc (1996 - 2024). Groundwater flow was simulated using MODFLOW-2005 (Harbaugh, 2005)

code, which is a widely used, industry standard, three-dimensional numerical groundwater flow modelling tool. The data and information to develop the model was drawn from Environment Canterbury's (ECan) online databases, including Canterbury Maps, Consents Database and the Wells Database. In addition, the region-wide numerical groundwater model developed by ECan and GNS in 2018 in support of Plan Change 7 of the Canterbury Land And Water Regional Plan was used to inform the hydrogeological conditions of the deeper aquifer system of the Box Drain area. A detailed description of the model is included in Appendix A.

All elevations in this report are listed in metre above Reference Level (m RL), which is the New Zealand Vertical Datum 2016 (NZVD 2016).

2 THE BOX DRAIN SITE

2.1 SITE DESCRIPTION

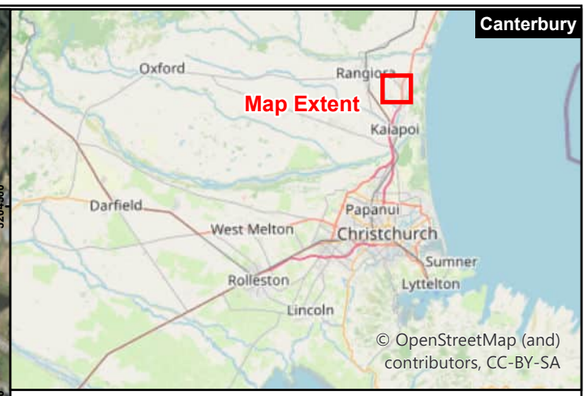
A detailed description of the site's characteristics relevant to these investigations is documented in WSP (2025). A brief summary of the key features of the site is provided below.

2.1.1 LOCATION, LAND USE AND CLIMATE

- The Box Drain site is located on the southwestern boundary of Woodend township on Rangiora Woodend Road. The site is relatively flat but falls away to the southwestern end by approximately 1.0 m from Rangiora Woodend Road (Figure 2-1) across a distance of about 500 m. The site and surrounding area is mainly used as farmland but there are also several residential subdivisions.
- A portion of the rainfall in the area will recharge groundwater. WSP used the Rushton (2006) to estimate the groundwater recharge. On an annual basis the groundwater recharge in the area is estimated to be approximately 18% of the total annual rainfall of about 600 mm, which equates to 108 mm per year. Further details are provided in Appendix A.

2.1.2 GEOLOGY AND HYDROGEOLOGY

- Geology: the site is underlain with fine sediments (mainly silts) down to a depth of between 10 m and 15 m below ground level (m bgl). These sediments have a low permeability and are thought to be part of the Christchurch Formation (Begg et al 2015). No impermeable iron pan was encountered during geotechnical investigations on the site. Below this lies the highly permeable Riccarton Gravel Aquifer which is confined by the overlying fine sediments. A further sequence of confining layers and aquifers lie beneath the Riccarton Gravel Aquifer. The shallow groundwater table as well as the Riccarton Gravel Aquifer water level are close to the surface. There could potentially be flowing artesian pressures in the Riccarton Gravel Aquifer in the area, although there is no direct evidence to confirm this.
- Groundwater flow direction: the groundwater gradient and therefore flow direction in the Riccarton Gravel Aquifer is from northwest to southeast, generally towards the coast. Shallow groundwater in the Christchurch Formation flows towards the open channel drainage network in the area, which therefore heavily influences the shallow groundwater levels, flows and flow direction.
- Groundwater level variation: Riccarton Gravel Aquifer levels recorded in Environment Canterbury (ECan) monitoring wells show a seasonal fluctuation of generally about 1m to 3 m, although it is acknowledged that the seasonal aquifer fluctuation could be larger if those wells were located closer to a large groundwater abstraction. Shallow groundwater levels recorded at three monitoring wells at the site show a seasonal fluctuation of about 1.5 m (Figure 2-2, monitoring well locations shown in Figure 2-4). The recorded winter high shallow groundwater levels are in the range of 7.5 to 8.5 m RL, which sits mostly above the onsite subsoil drain and thus the subsoil drain drains groundwater from the Box Drain site in winter. However, during the summer of 2024 the shallow groundwater levels appear to fall below the subsoil drain invert levels at times, and it is likely the subsoil drain did not drain any groundwater during that time. Low seasonal groundwater recharge in combination with summer groundwater abstraction from the underlying Riccarton Gravel Aquifer is likely to have caused the shallow groundwater levels in the summer of 2024 to fall below the subsoil drainage level at the southern end of the site.



LEGEND

- Box Drain site boundary
- Rivers, streams and open channels
- Riccarton Aquifer contours (interpreted by ECan)
- Nearby water supply wells in Riccarton Aquifer
- ECan groundwater monitoring wells
- WDC Box Drain monitoring wells

0 200 400 600
Meters

REFERENCE SCALE: 1:14,900 (at A3)

PROJECTION: NZGD 2000 New Zealand Transverse Mercator

CLIENT
WAIMAKARIRI DISTRICT COUNCIL

PROJECT
BOX DRAIN - HYDROGEOLOGY INVESTIGATIONS

TITLE
BOS DRAIN SITE AND SURROUNDING AREA

CONSULTANT

YYYY-MM-DD	2025-08-15
PREPARED	EVN
REVIEW	TH
APPROVED	TH

PROJECT NO.	REPORT	REV.	FIGURE
3-C2673.00	002	1	**2-1**

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25mm
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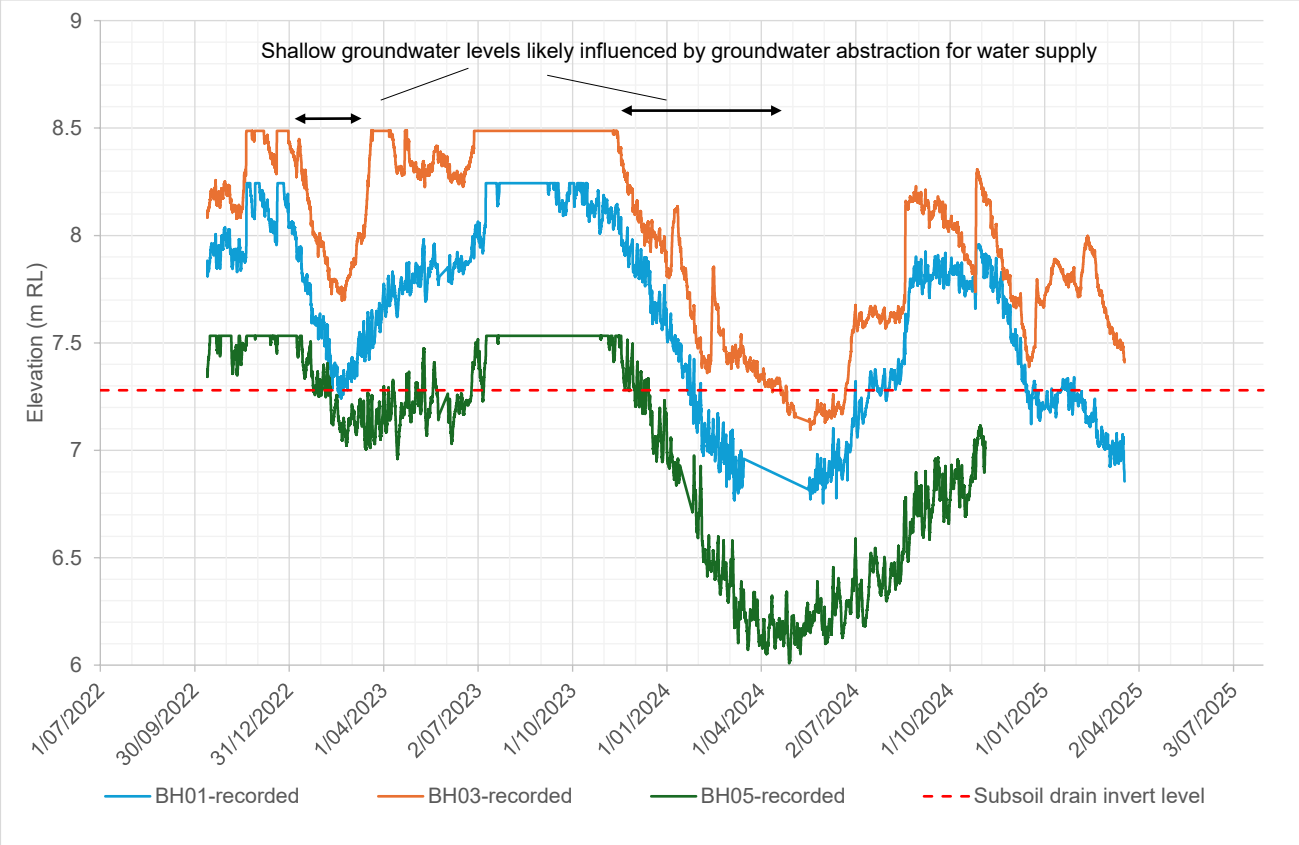


Figure 2-2 Recorded shallow groundwater levels at the Box Drain site and minimum subsoil drain invert level

- Groundwater abstraction: there are several consented groundwater abstractions for water irrigation, domestic, stockwater and public water supply in the area. Some of these groundwater abstractions are from deep wells screened into the deeper aquifers. However, several wells are targeting the uppermost Riccarton Gravel Aquifer, and these are indicated in Figure 1-1. Consented flow rates are generally modest at around 20 to 500 m^3/day, but there are three wells near the site (M35/0450, M35/0470 and M35/0225, locations shown in Figure 2-1) that have notably larger consented rates of 870 to 2,300 m^3/day. These are likely to cause notable drawdown of Riccarton Gravel Aquifer water levels but could also cause the shallow groundwater table to fall during dry summer periods.

2.1.3 SURFACE WATER AND STORMWATER

- The site is located in the catchment of the Cam River / Ruataniwha Awa which flows out into the Kaiapoi River and then into the Waimakariri River near the mouth. A network of farm drains (i.e., open channels) dissect the area and are considered to drain both surface runoff as well as shallow groundwater (Figure 2-3).
- The current stormwater treatment facility at Box Drain collects stormwater from 28 hectares (ha) of the Woodend Township to an overflow manhole at the northeastern end of the site, which overflows to a long swale during high rainfalls, whilst low flows are diverted to a buried stormwater culvert that flows out to an open drain at the southwestern corner of the property (Figure 2-3). A gross pollutant trap located downstream of the overflow manhole treats stormwater prior to discharge into the Box Drain pipe. A subsoil drain has been installed beneath and beside the culvert and drains groundwater (as discussed above). The culvert invert level varies from 8.12 m RL at the northeastern side of the site, to 7.28 m RL at the southwestern side, where it flows out in the open channel which has a bed at 7.28 m RL. Level survey results of the existing Box Drain are included in Appendix B.

PROJECT

Client: Waimakariri Distric Council
Box Drain - Hydrogeological Modelling Study

WSP Christchurch
12 Moorhouse Avenue
Christchurch 8011
+64 9 353 7375

FIGURE

Figure 2-3: Box Drain Site Location Plan

PROJECT NUMBER	REVISION DATE	REVISION
3-C2673.00	07/08/2025	R1

ATTRIBUTION

LEGEND

- Property Boundary
- Box Drain
- Open Channel
- Tuahiwi Stream
- Ruataniwha - Cam River
- WDC Box Drain Investigation Bores
- WDC Box Drain Investigations with Monitoring Wells

SCALE

0 250 500 750 m

- The open channel in which the subsoil drain beneath the Box Drain culvert flows into, has an invert level of 7.28 m RL. WSP installed a temporary water level recorder in the open channel to understand how water levels fluctuate. This showed the open channel has a dry weather water depth that is usually no more than about 0.1 m and the dry weather stage height is thus about 7.38 m RL. The invert levels of the proposed stormwater facility need to be well-above this level to allow free outflow under gravity to the open channel. However, the open channel water level can temporarily rise by about 0.85 m following heavy rainfall. This rise of 0.85 m to a level of 8.23 m RL occurred on the 29 April - 2 May 2025 event with 102.5 mm of rainfall in 48 hours as shown in Figure 2-5 (monitoring well locations shown in Figure 2-4). This increase in the drainage level would have reduced the drainage capacity of the open channel and subsoil drain, resulting in a gradual rise of groundwater levels across the site (only groundwater levels for BH03 and BH05 are shown which are closed to the proposed wetland). Whilst the open channel water levels recovered to below the proposed wetland invert level within about 2 days, groundwater levels stayed elevated compared to pre-event levels for about a month (Figure 2-5). However, the associated increased groundwater inflow is unlikely to compromise the ability for the proposed wetland to drain. The open channel stage height fell below 7.5 m RL on 24 May 2025 and generally remain at about 7.4 m RL in the period from June to August 2025. Occasional increases to above 7.8 m RL occurred five times over that period in response to rainfall events but never lasted more than 1 day.
- The open channel stage height remains below the proposed wetland operational range of stage heights (7.8-7.995 m RL; described in Section 3) most of the time during the April-August 2025 monitoring period, and only exceeded the minimum level on five occasions for no more than 1 day.

Figure 2-4 Site map with monitoring well locations

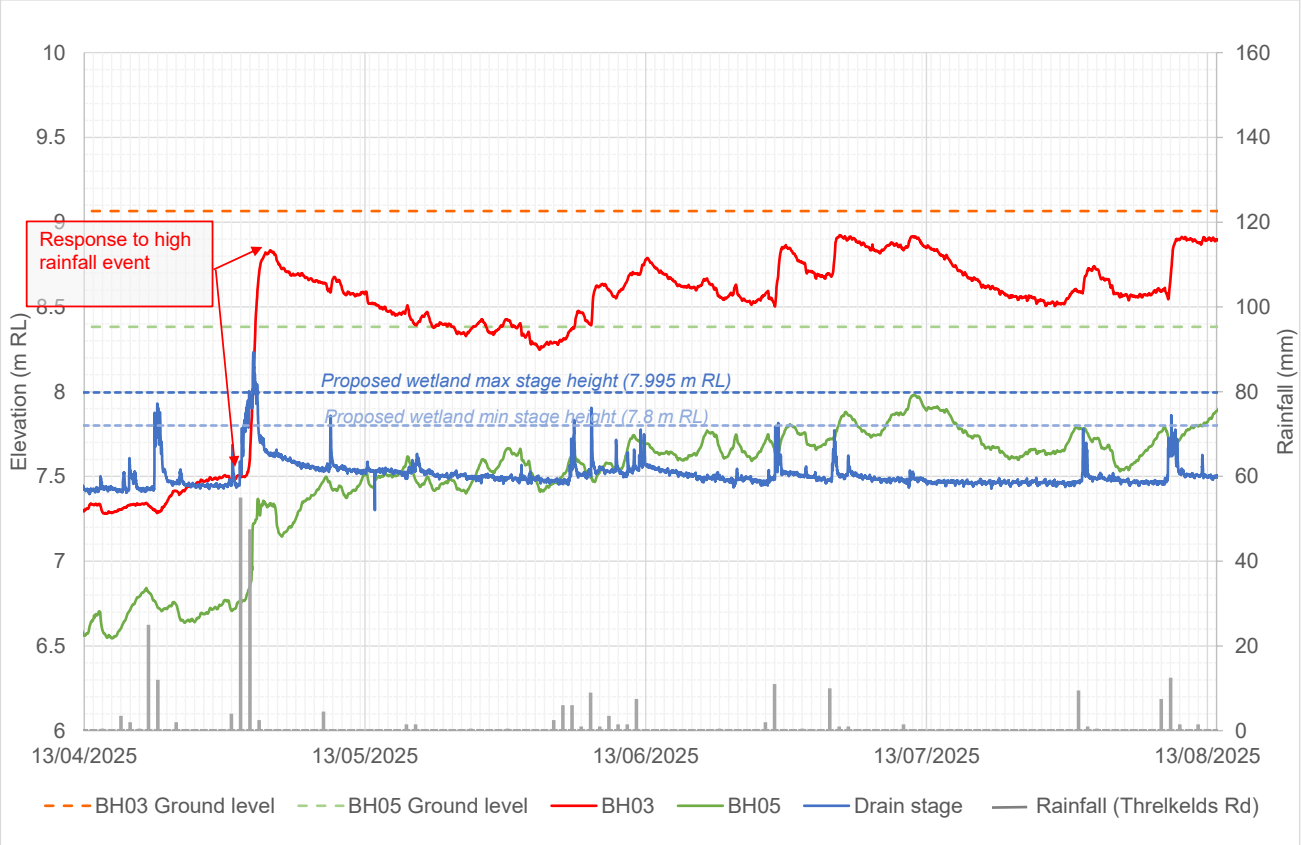


Figure 2-5 Open channel stage height and groundwater level time series during winter 2025

2.2 HYDROGEOLOGICAL CONCEPTUAL MODEL

The groundwater system and the key processes that determine changes in groundwater flows and levels are often summarised in a Hydrogeological Conceptual Model. The Hydrogeology Conceptual Model forms the basis for the development of the numerical groundwater model used for the further assessments of the feasibility of the proposed stormwater facility. The groundwater model is described in detail Appendix A.

The Hydrogeological Conceptual Model at the Box Drain site can be described as follows:

- The shallow groundwater levels at the site and the surrounding areas are generally at less than 2 m below the ground surface. Due to the low permeability of the soils beneath the site and the shallow groundwater table, the shallow groundwater level tends to rise quickly following heavy rainfall. Nonetheless, the groundwater level is strongly controlled by the network of open channels that were historically installed to drain the land and keep groundwater levels below ground to allow for farming.
- The approximately 15 m thick low-permeability silty soils beneath the site form a confining layer for the underlying Riccarton Gravel Aquifer. During the dry summer months when water demand and thus groundwater abstraction from wells in the in the area is high, the Riccarton Gravel Aquifer water levels will be drawn down. In combination with higher evapotranspiration rates in the summer, which leads to reduced rainfall recharge, the Riccarton Gravel Aquifer groundwater abstractions will cause the shallow groundwater levels to also decline. This leads to distinct seasonal patterns in the shallow groundwater level timeseries recorded at the site, with high groundwater levels generally occurring in winter and spring, and low groundwater levels during summer and autumn. As a result, the subsoil drain beneath the Box Drain culvert will mainly drain groundwater during the winter and spring period. During dry summer periods, the groundwater levels will fall entirely below the invert level of the full length of the subsoil drain,

and that of the open channel which Box Drain culvert flows into. To clarify, any drainage feature, such as a subsoil drain will stop draining water when the groundwater level falls below its invert.

- The proposed stormwater facility would include a first flush basin followed by a wetland in which runoff during certain design storm events would be collected. If the proposed stormwater facility is constructed below the groundwater table, it will also capture groundwater inflows. After passing the stormwater facility, the water will flow out via an outflow structure at the southwestern end of the site into the existing open channel. Water can only flow out the wetland if the stage height in the receiving open channel is lower than the wetland water level. Similarly, the winter high groundwater levels can only be controlled by the existing subsoil drain and by the proposed stormwater facility if the open channel stage height is sufficiently below the required drainage levels of the proposed wetland or at the subsoil drain invert level.
- If the open channel stage height rises above the operational water level of the proposed stormwater facility, this will reduce the drainage of the stormwater facility, and its water levels may rise above the operational maximum stage height. If the proposed stormwater facility water levels rise above the surrounding ground level, parts of the site will be flooded. Under those circumstances, groundwater levels will also gradually rise and potentially reach the surface.

3 STORMWATER DESIGN SCENARIO SETUP IN GROUNDWATER MODEL

3.1 SCENARIO SETUP

The feasibility of the proposed stormwater design depends on the ability of the design to minimise groundwater inflow during winter and limit notable rises in nearby shallow groundwater levels, as persistent water ponding conditions could lead to damage of wetland planting, hence needs to be appropriately selected. WSP assessed this with the groundwater model described in Appendix A. The stormwater design scenario (i.e., Design 1) considered in this assessment is based on Storm Environmental (2024) report and on and email received from Storm Environmental on 26 June 2025 and was built into the model. Design 1 has the following key characteristics:

- The footprint of the first flush basin is 1.2 ha and is located near the northeastern boundary of the site. The wetland is located directly downstream of the first flush basin and has a footprint of 1.2 ha.
- The first flush basin invert has a gradient decreasing from 8.05 m RL at the northeastern side to 7.90 m RL on the southwest side. The invert level of the wetland has no gradient and is set at 7.75 m RL.
- The operational water level in the stormwater facility is designed to fluctuate between 7.8 and 7.995 m RL. An outflow structure (e.g., a weir a sump) at the southwestern end of the wetland will be set at a height at which the wetland will spill over when the water levels is above 7.8 m RL. To simulate this in the groundwater model, the water level in the first flush basin and wetland are assumed to fluctuate following a cyclical pattern ranging from 7.8 m RL in the summer months to 7.995 m RL in the winter months as listed in Table 3.1.
- The modelling scenario was run as a transient simulation (i.e., time-dependent) in which weekly time steps are simulated that respond to monthly changes in rainfall recharge, groundwater abstraction and drain or stormwater facilities water levels.
- The model was run for three cases:
    1. for a base case representing an average climatological year in the current state,
    2. for a case in which Design 1 is activated as described above, and assuming water levels in all nearby open channels remain steady throughout the whole simulation period.
    3. for a case in which Design 1 is activated as described above, assuming winter water levels in all nearby open channels are 0.5 m higher than in the summer situation.

The key features of the proposed stormwater facility – Design 1 are visually depicted in Figure 3-2 and Figure 3-1 below.

Table 3.1 Assumed cyclical operational water level change in proposed stormwater facility – Design 1

Month	Wetland Stage (m RL)
January	7.845
February	7.9
March	7.95
April	7.97
May	7.98
June	7.995
July	7.995
August	7.98
September	7.97
October	7.95
November	7.9
December	7.845

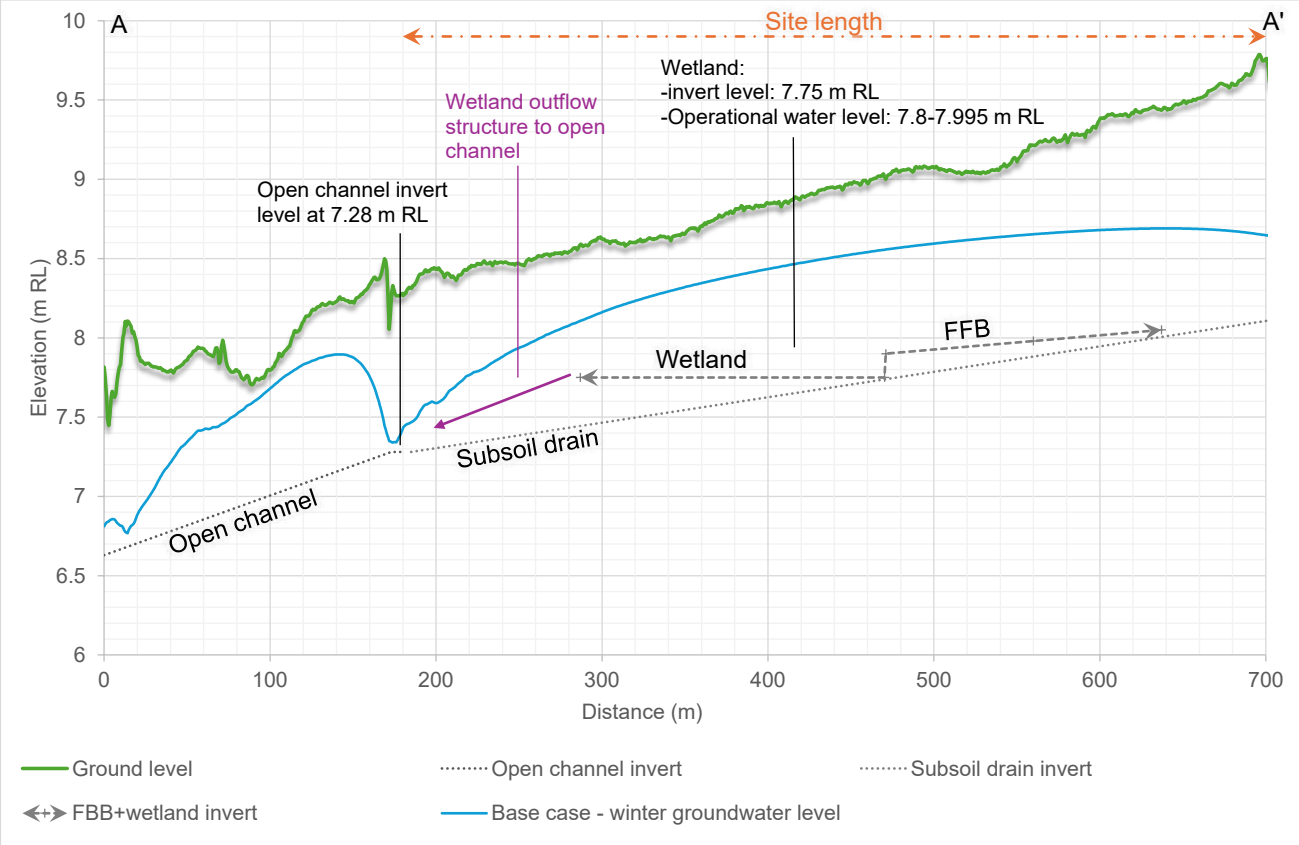
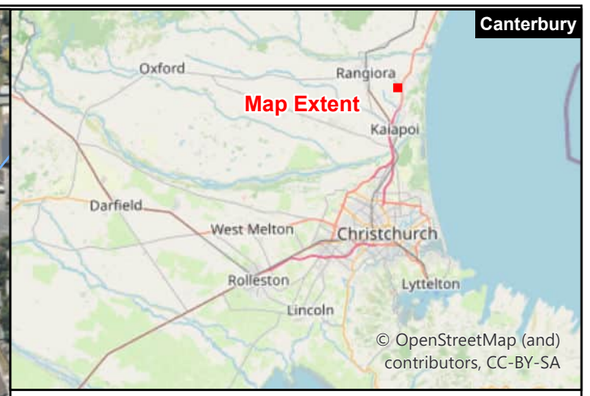


Figure 3-1 Stormwater facility – Design 1 – overview in cross section A-A' (cross section line shown in Figure 3-2)



LEGEND

- Pre-existing drainage features
- Stormwater facility - Design 1
- Cross section lines
- Modelled winter groundwater levels (m RL)
- WDC Box Drain monitoring wells

0 50 100 150
Meters

REFERENCE SCALE: 1:2,500 (at A3)

PROJECTION: NZGD 2000 New Zealand Transverse Mercator

CLIENT
WAIMAKARIRI DISTRICT COUNCIL

PROJECT
BOX DRAIN - HYDROGEOLOGY INVESTIGATIONS

TITLE
STORMWATER FACILITY - DESIGN 1 OVERVIEW

CONSULTANT
wsp

YYYY-MM-DD	2025-08-15
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APPROVED	TH

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3.2 RESULTS

3.2.1 GROUNDWATER INFLOWS

Groundwater inflows at the site

Groundwater inflows for the base case into the subsoil drain beneath the Box Drain culvert will change gradually as groundwater levels rise and fall seasonally. The modelled gradual change in inflows to the subsoil drains is shown in Figure 3-3 below, with the first year shown (i.e., 2026) representing the 'base case', and the second year (i.e., 2027) representing the 'Design 1 case' in which Design 1 is operational, but the water levels (i.e., stage height) in nearby open channels assumed to be constant.

In an average year in the current state (i.e., base case), the groundwater inflows to the subsoil drain beneath the Box Drain culvert are expected to be highest in late-winter early-spring at 55 m^3/day. Summer inflows to the subsoil drain would likely be less than 5 m^3/day and at times no inflows would occur at all. Nonetheless, persistent groundwater inflows at a rate above 5 m^3/day into the subsoil drain beneath the Box Drain culvert are expected to last for about 6 to 7 months each year.

When Design 1 is operational the water level in the proposed first flush basin and wetland will be mostly below the nearby groundwater level during winter, which will cause shallow groundwater to flow into the stormwater facility at a modelled rate of 49 m^3/day (i.e., 25 m^3/day to the first flush basin and 24 m^3/day to the wetland). The subsoil drain beneath the Box Drain culvert will also draw in groundwater, but at a rate of 39 m^3/day, which is less than in the base case. This is because the stormwater facility will take over some of the groundwater drainage. Nonetheless, the total groundwater drainage at the site will increase to 88 m^3/day.

If it is assumed that the winter water levels (i.e. stage) in the nearby open channels is about 0.5 m higher than in the summer, then groundwater inflows to the proposed stormwater facility (Design 1) and the subsoil drain beneath the Box Drain culvert will be slightly different. Groundwater inflows to the stormwater facility will be somewhat higher at 53 m^3/day (i.e., 26 m^3/day to the first flush basin and 27 m^3/day to the wetland), however, the subsoil drain inflows are lower at 31 m^3/day.

In addition, it will take a few weeks longer for the groundwater inflows to the stormwater facility and the subsoil drain to reduce to almost zero, so the total cumulative groundwater inflows are higher as well, if it is assumed that winter water levels in nearby open channels are about 0.5 m higher than in the summer.

Groundwater inflows to the open channel network surrounding the site

The open channel network surrounding the site (Figure 3-5) are likely to play an important role in controlling groundwater levels and minimise water ponding on the surface in the wider area. Whilst the open channel network captures and conveys stormwater runoff flows, it also drains groundwater. The groundwater inflows are usually referred to as baseflows which are generally much smaller than stormwater flows during significant storm events. However, these baseflows fluctuate considerably. Groundwater modelling suggests that the open channel network surrounding the site receives groundwater inflows ranging from 900 m^3/day during summer to 2,400 m^3/day in winter (i.e., approximately 9 to 30 L/s).

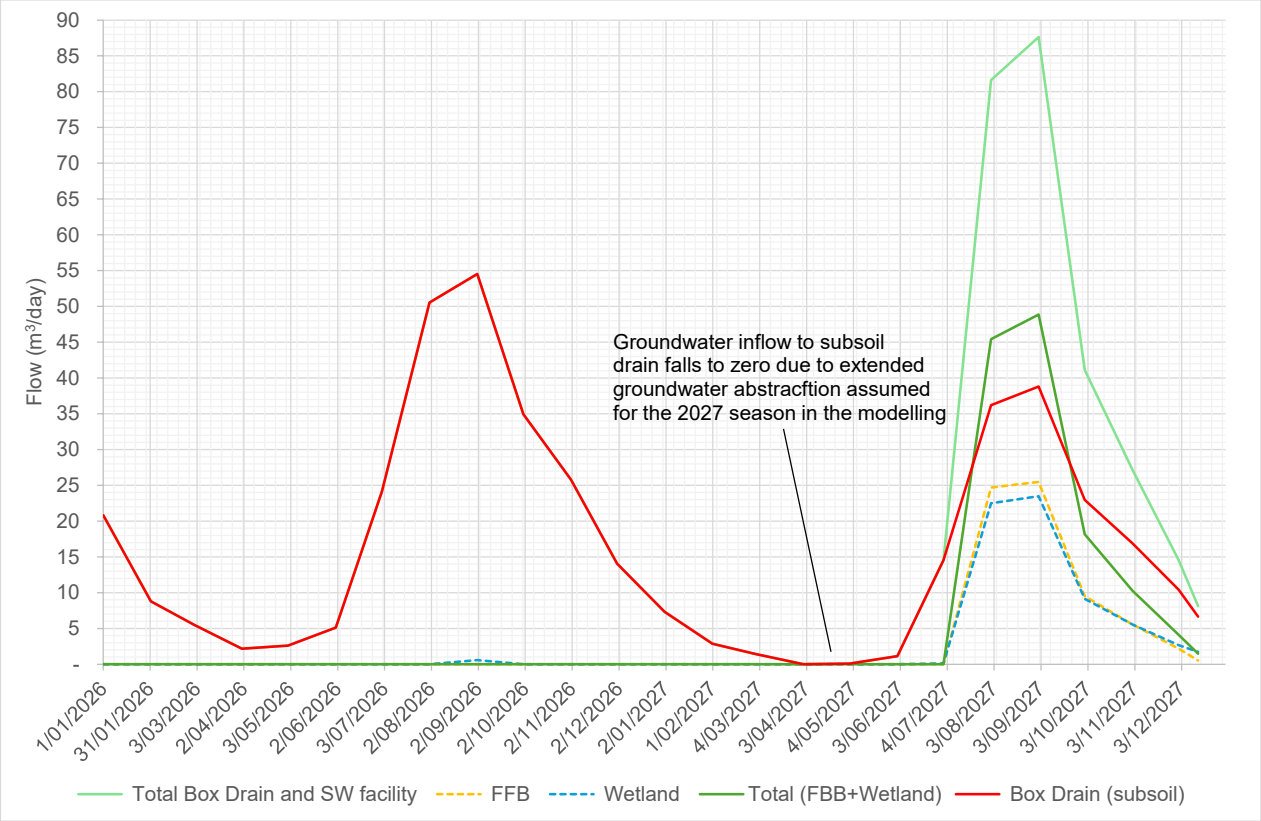

Figure 3-3 Modelled seasonal groundwater inflow changes into the subsoil drain and proposed stormwater facility, with open channel stage assumed to be constant.

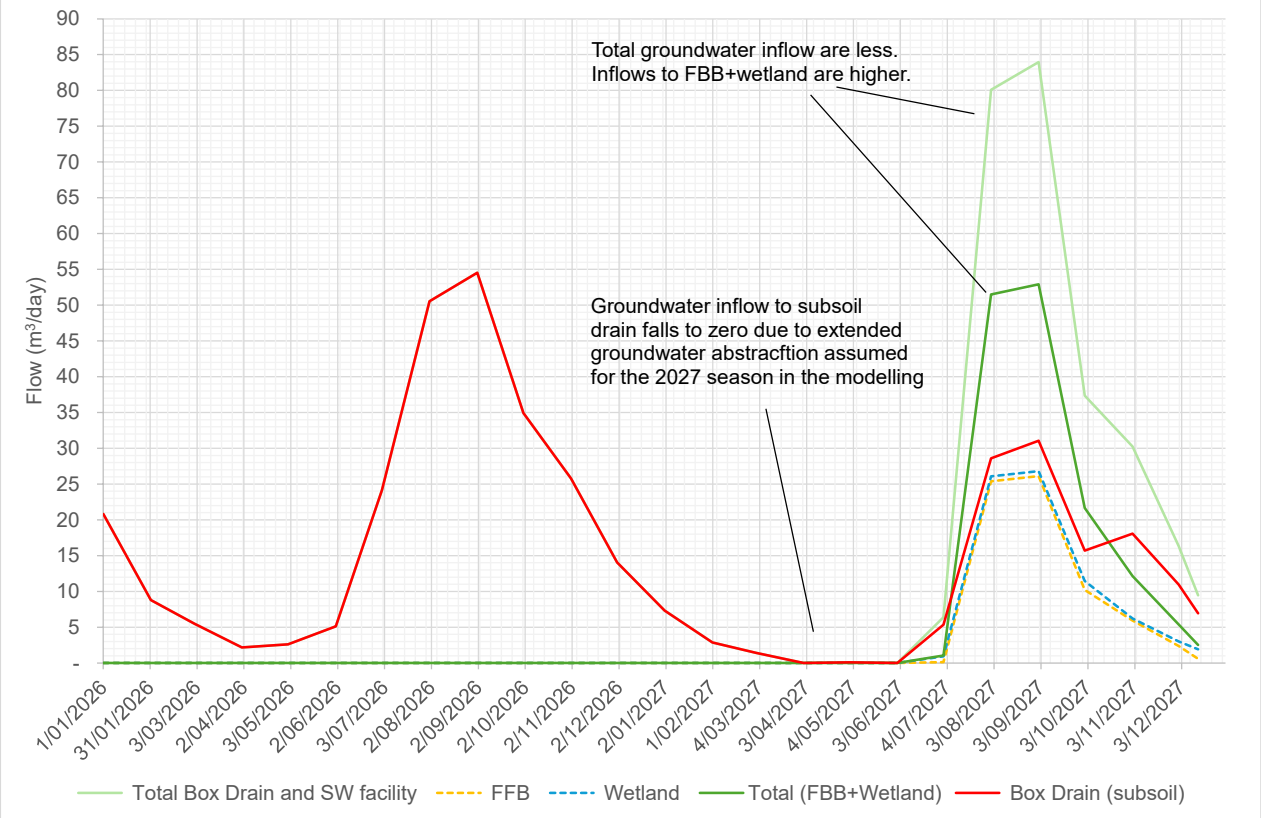

Figure 3-4 Modelled seasonal groundwater inflow changes into the subsoil drain and proposed stormwater facility, with open channel stage assumed to be fluctuating seasonally by 0.5 m.

LEGEND

- Box Drain site boundary
- Pre-existing drainage features

0 200 400 600
Meters

REFERENCE SCALE: 1:14,900 (at A3)

PROJECTION: NZGD 2000 New Zealand Transverse Mercator

CLIENT
WAIMAKARIRI DISTRICT COUNCIL

PROJECT
BOX DRAIN - HYDROGEOLOGY INVESTIGATIONS

TITLE
OPEN CHANNEL NETWORK EXPLICITLY MODELLED IN THE GROUNDWATER MODEL

CONSULTANT

YYYY-MM-DD	2025-08-15
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3.2.2 GROUNDWATER LEVEL RESPONSES

The shallow groundwater levels at the site will respond to the seasonal changes in rainfall recharge, groundwater abstraction as well as the drainage features, such as the subsoil drain beneath the Box Drain culvert, and the nearby open channels. The modelled seasonal changes in shallow groundwater levels are visualised in two cross sections shown in Figure 3-6 and Figure 3-7, with the corresponding cross sections shown on the map in Figure 3-2 above.

The two cross sections A-A' and B-B' (Figure 3-6 and Figure 3-7) help understand how the groundwater levels vary spatially across the site, and this will vary across the seasons in an average year in the current state (i.e., the base case). Groundwater levels rise close to the surface in winter and may even cause local water ponding at the surface in places. The groundwater levels are generally higher in the middle of the site, where the distance to nearby drainage features (i.e., subsoil drain and open channel) is the furthest. In proximity of the drainage features, the groundwater levels are drawn down by the drainage features to the water level in the drainage feature. For example, the effect of the subsoil drain beneath the Box Drain culvert is clearly visible in the cross sections, drawing groundwater levels locally down by 1.5 m. In the summer, the groundwater levels fall notably across the site. In some parts of the site they fall below the water levels or invert levels of nearby drainage features. Drainage features are no longer active in the model when the groundwater table is below them.

When the stormwater facility is operational, it will mainly influence groundwater levels in the winter season, when and where groundwater levels rise above the first flush basin invert levels and wetland water levels, as is shown in the cross sections in Figure 3-8 and Figure 3-9. Groundwater levels adjacent to the stormwater facility can be up to 0.5 m higher than the water level in the wetland. Because the wetland water levels are assumed to be controlled by its downstream outflow structure, the wetland should remain sufficiently drained at all times. In the summer season groundwater levels are similar to what they would be without the stormwater facility, hence summer water levels are the same as they are in the base case.

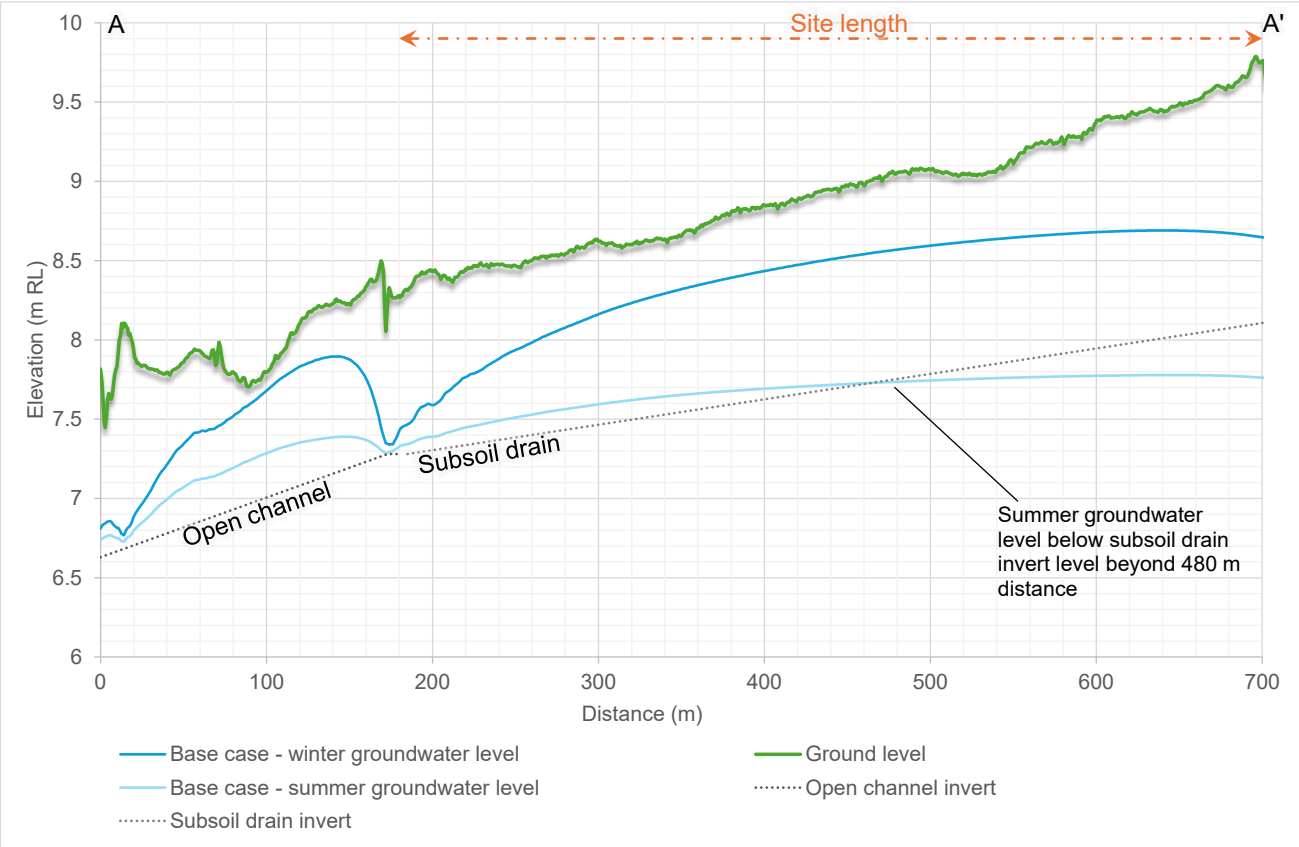

Figure 3-6 Modelled groundwater level in the base case – cross section A-A' (cross section line in Figure 3-2)

Figure 3-7 Modelled groundwater level in the base case – cross section B-B' (cross section line in Figure 3-2)

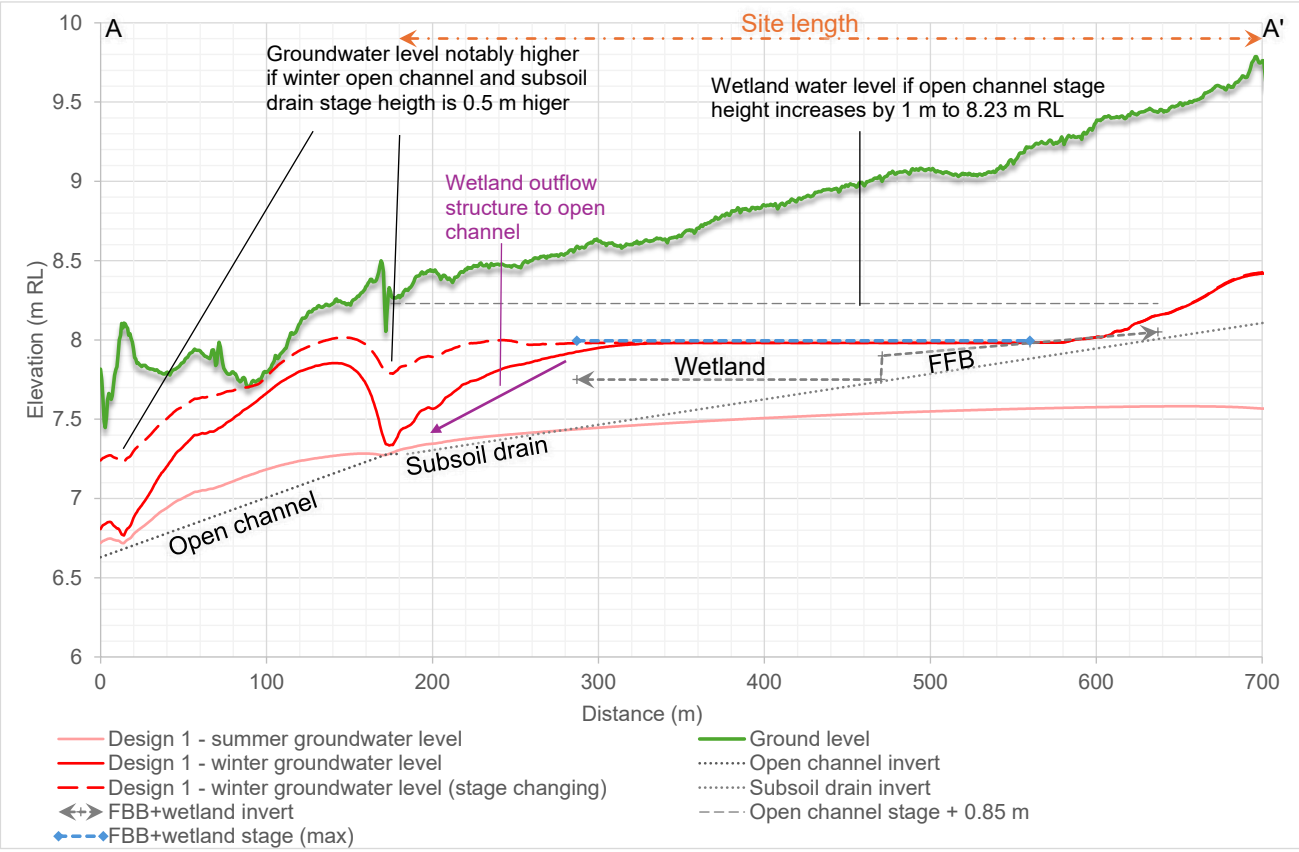

Figure 3-8 Modelled groundwater level in the Design 1 case – cross section A-A' (cross section line in Figure 3-2)

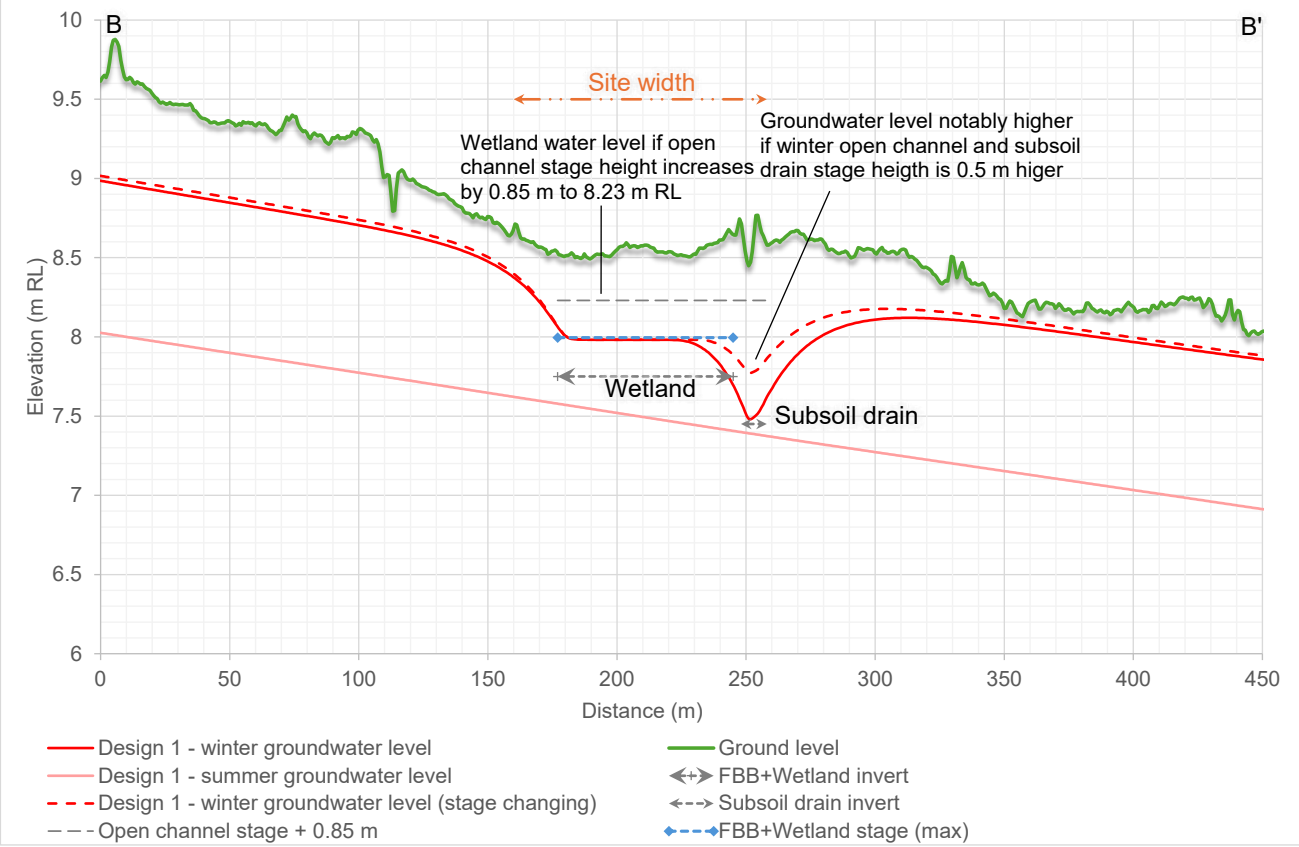

Figure 3-9 Modelled groundwater level in the Design 1 case – cross section B-B' (cross section line in Figure 3-2)

4 DISCUSSION

4.1 GROUNDWATER INFLUENCE ON STORMWATER FACILITY (DESIGN 1) PERFORMANCE

Groundwater levels can be sufficiently controlled by the combination of the existing subsoil drain and the proposed stormwater facility assuming the Design 1 configuration described in Section 3, as long as the open channel water levels (i.e., stage) southwest of the site remains below the design wetland water level at all times (assumed to be between 7.8 and 7.995 m RL for Design 1). However, when the open channel water levels southwest of the site rise above the design wetland water levels, the wetland can no longer drain by gravity via the downstream outflow structure. Groundwater modelling cannot be used to assess whether the wetland can properly drain. Further investigations including hydraulic modelling and long-term water level monitoring may be required to confirm if the open channel water levels might persistently remain above the design wetland water levels during extended periods. In that case, the wetland may require pumping during those times.

WSP also notes that the stormwater facility design including its downstream outflow structure should be designed to accommodate not only the expected stormwater inflows but also the persistent groundwater inflows of around 88 m^3/day (i.e., 1 L/s) during the winter season. Nonetheless, it is expected that the groundwater inflows are considerably lower than stormwater inflows during significant events and this may have limited bearing on the overall performance of the stormwater facility.

From the cross section in Figure 3-8 and Figure 3-9 it becomes clear that wetland outflows through the outflow structure to the southwest of the wetland, could be compromised by high groundwater levels unless the outflow structure is contained within a closed pipe that does not capture groundwater. However, a rise of more than 0.5 m of the open channel water level (i.e., stage) could impede proper outflows from the wetland, resulting in increased water depth in the wetland.

A second subsoil drain could be installed at the site along the northern boundary, which would draw the groundwater table further down at the site. This will likely notably reduce, or even entirely remove the winter groundwater inflows to the wetland. This will also result in the wetland only receiving inflows from stormwater. At times of prolonged drought neither stormwater or groundwater inflows will occur, and the wetland will be completely dry for extended periods of time.

4.2 FUTURE CHANGES (INCLUDING CLIMATE CHANGE)

Various future changes could alter the interaction between groundwater and the proposed stormwater facility. The most important changes to consider are the following:

- Increased frequency of high intensity rainfall due to climate change.
- Reduction of groundwater abstraction from the Riccarton Gravel Aquifer because of a reduction in demand.
- Changes to the pre-existing open channel drainage network.

These future changes and how they may change the influence of groundwater on the performance of the stormwater facility is discussed below. These future changes are beyond the scope of the modelling undertaken for this report, but can be included in further iterations of the stormwater facility designs.

4.2.1 INCREASED FREQUENCY OF HIGH INTENSITY RAINFALL DUE TO CLIMATE CHANGE

In general terms it is expected that climate change will result in higher evapotranspiration in Canterbury which will reduce groundwater recharge, mainly in the spring, summer and autumn period. High intensity rainfall events are expected to become more frequent, but this is unlikely to notably increase the winter groundwater recharge. Nonetheless, individual high intensity events can lead to increased groundwater levels and higher groundwater inflow rates to the proposed stormwater facility. As long as the stormwater facility through-flow and outflow to the open channel can be sufficiently maintained, the stormwater facility's overall performance is unlikely to be affected by increased groundwater inflows during high intensity event, because groundwater inflows will always be multiple orders of magnitude less than stormwater inflows.

The key issue is whether the open channel stage height can be sufficiently controlled, or if water backing up will become more frequent. Whilst most of the open channels drain groundwater, this groundwater contribution is small compared to flows during significant storm events. Nonetheless, the groundwater inflows, commonly referred to as baseflow, is expected to be considerably higher in the winter than in the summer season.

4.2.2 REDUCTION OF GROUNDWATER ABSTRACTION FROM THE RICCARTON GRAVEL AQUIFER

Land use changes such as a change from farming to residential subdivision may result in a reduction in a demand to abstraction groundwater from the area surrounding the site. This could cause groundwater in the shoulder seasons (i.e., spring and autumn) to become persistently higher than is currently experienced. Winter groundwater levels may not be affected as much because groundwater abstraction for farming occurs predominantly beyond the winter season.

The effects of reduced groundwater abstraction could be included in the modelling, and this may show a slight increase in groundwater inflows to the proposed stormwater facility. However, this is unlikely to significantly alter the overall performance of the stormwater facility.

4.2.3 CHANGES TO THE PRE-EXISTING OPEN CHANNEL DRAINAGE NETWORK

Land use changes can also lead to a change in the layout of the open channel network when farmland is converted into residential subdivisions, because drainage requirements for farming may be different than they are for residential subdivisions. In addition, groundwater drainage is often not properly considered in stormwater designs for new developments, leading to persistently higher groundwater levels and poorer drainage outcomes.

For the proposed stormwater facility, this could lead to additional groundwater inflows from adjacent properties. However, these additional groundwater inflows are expected to be relatively modest. As stated above, as long as the stormwater facility through-flow and outflow to the open channel can be sufficiently maintained, the stormwater facility's overall performance is unlikely to be affected by these increased groundwater inflows.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

The groundwater modelling undertaken for Stage 3 of the project indicates that shallow groundwater levels in the area are strongly influenced by the existing open channel drainage network surrounding the site and seasonal variations in groundwater abstraction and rainfall recharge in the area. Groundwater inflows to the subsoil drain beneath the Box Drain culvert and the proposed stormwater facility are highest during winter and spring, with minimal or no inflows during dry summer periods. Persistent groundwater inflows at a rate above 5 m^3/day into the subsoil drain beneath the Box Drain culvert are expected to last for about 6 to 7 months each year. The proposed Design 1 configuration is expected to effectively manage groundwater ingress, with the stormwater facility assuming a significant portion of the drainage load, thereby reducing inflows to the existing subsoil drain beneath the Box Drain culvert.

However, the performance of the stormwater facility depends heavily on its ability to convey flows to the open channel at the southwestern end of the site. The performance is contingent on maintaining open channel water levels below the design wetland water level. If open channel levels rise above this threshold, the wetland may not drain effectively, potentially requiring pumping to maintain functionality. The facility must also be designed to accommodate persistent groundwater inflows of more than 88 m^3/day (i.e., 1 L/s), particularly during winter, although these are expected to be minor compared to stormwater inflows during significant rainfall events.

Future changes such as climate change, reduced groundwater abstraction, and modifications to the open channel network could alter groundwater dynamics, potentially leading to higher groundwater levels and greater inflows into the proposed stormwater facility. While these changes are beyond the scope of the current modelling, they should be considered in future design iterations to ensure long-term resilience and performance of the stormwater facility.

5.2 RECOMMENDATIONS

WSP recommends the following is further investigated to better inform the proposed Box Drain stormwater facility design:

- We consider the available data is sufficient to inform decision making of the next stage of the stormwater facility design. However, Further monitoring of the open channel stage height fluctuations at the southwestern end of the site. This will provide further information on the duration of periods of increased stage height that could impede the drainage of the stormwater facility.
- A second subsoil drain could be installed at the site along the northern boundary, which would draw the groundwater table further down at the site and notably reduce winter groundwater inflows to the stormwater facility. The efficacy of this measures can be further explored with groundwater modelling.
- Hydraulic modelling to assess the overall performance of the proposed stormwater facility design. This should include assessments of:
  - how frequent and to what extend the open channel stage height could compromise the stormwater facility's outflows, taking into account groundwater inflows and how these may vary across the seasons.

— the through-flows of the stormwater facility, taking into account groundwater inflows and how these may vary across the seasons.

This report provides groundwater inflows information that could be included.

6 REFERENCES

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APPENDIX A

GROUNDWATER MODEL DESCRIPTION

1. Model purpose

The purpose of the Box Drain numerical groundwater model is to assess the interaction between shallow groundwater and the proposed stormwater facility at the Box Drain site in Woodend (Figure A.1). Of specific interest are potential groundwater inflows into the proposed stormwater facility and how these inflows change seasonally. How groundwater levels respond to seasonal changes once the stormwater facility is operational is also of interest.

Some interaction with the shallow groundwater system and the underlying Riccarton Gravel Aquifer (which could be flowing artesian at the site) should be anticipated and can influence groundwater flows and levels at the site. The model therefore incorporates a wider area around the site as well as the Riccarton Gravel Aquifer beneath the site.

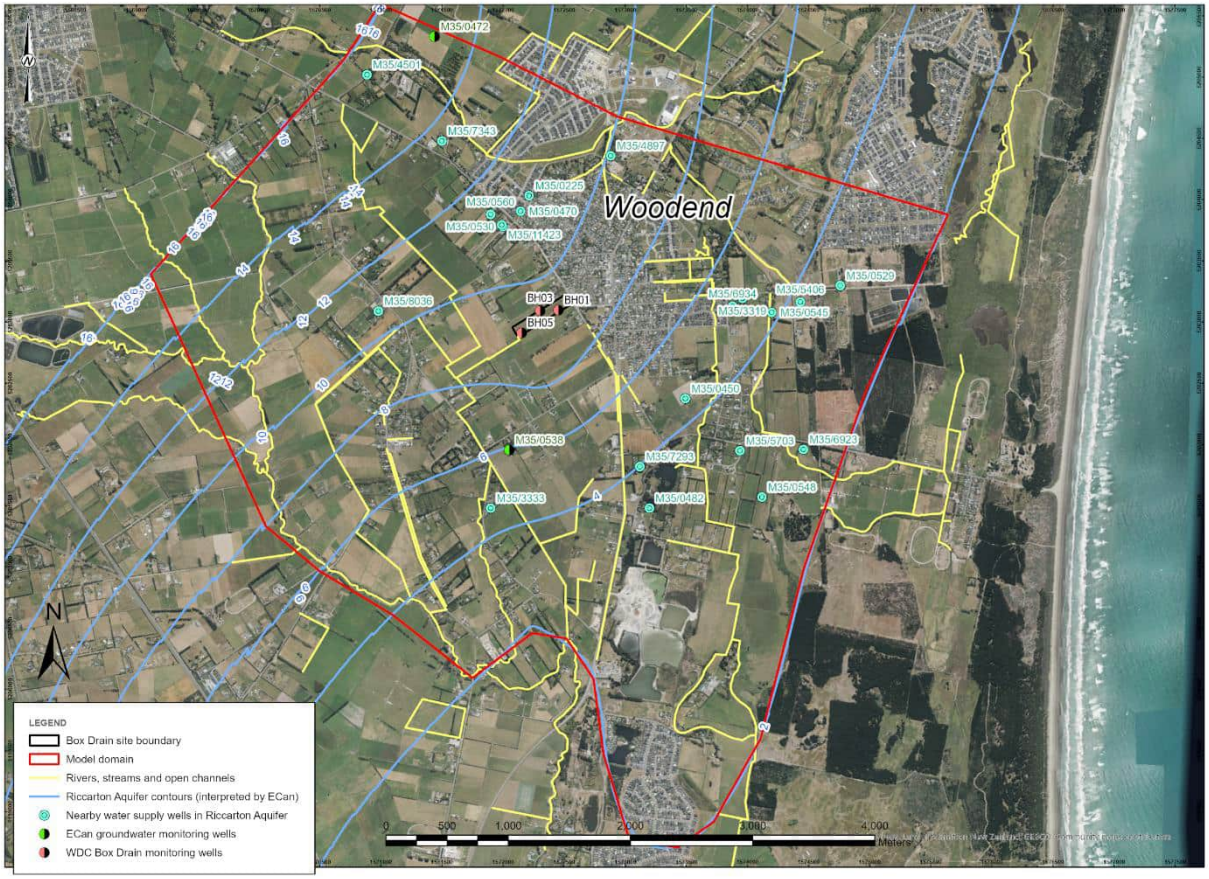

Figure A.1 Box Drain numerical groundwater model overview map.

2. Model code

The Box Drain numerical groundwater model was constructed and run using the Groundwater Vistas V9 modelling package. Groundwater Vistas was developed by Environmental Simulations Inc (1996 - 2024). Groundwater flow was simulated using MODFLOW-2005 (Harbaugh, 2005), which is a widely used, industry standard, three-dimensional numerical groundwater flow modelling tool.

3. Data and information

The data and information to develop the model was drawn from ECan's online databases, including Canterbury Maps, Consents Database and the Wells Database. In addition, the region-wide numerical groundwater model developed by ECan and GNS in 2018 in support of Plan Change 7 of the Canterbury Land and Water Regional Plan (Hemmings et al, 2018) was used to inform the hydrogeological conditions of the deeper aquifer system of the Box Drain area.

In addition, the results of site-specific investigations have been used, as described in WSP (2025).

4. Model area and grid structure

The model area is shown in the overview map presented in Figure A.1 below. It covers an area of approximately 5 km by 6 km (totaling 25,001,875 m^2). The model cell sizes vary from 100 m by 100 m in the outer areas to 5 m by 5 m at the site. The model has a total of 471,276 active cells.

5. Model layers

The model has 4 layers as follows:

- Layer 1 to 3: represents the top confining layer of the Christchurch Formation consisting of low-permeability silts and clays. The thickness of each layer is approximately 5 m thick, and the total thickness of the confining layer is therefore approximately 15 m. The top of layer 1 represents the ground level. Elevations for the top of Layer 1 were derived from 2020-2023 LiDAR data from the area obtained from LINZ.

- Layer 4: this layer represents the Riccarton Gravel Aquifer beneath the Christchurch Formation. The thickness of this layer is variable, but on average about 20 m thick. The thickness was derived from the Christchurch 3D geological model developed by GNS (Begg 2015).

6. Boundary Conditions

No-flow boundaries have been applied to the northeast and southwest of the model domain in each layer. Constant head boundaries (i.e., fixed head boundaries) have been applied to layer 4 of the model to the northwest boundary (16 m RL) and the southeast boundary (2 m RL). The northwest constant head boundary varies seasonally and fluctuates by 1 m in transient simulations.

Drainage boundaries have been used to simulate the effects of surface water. Drains in the model will only remove groundwater from the model when the modelled groundwater level adjacent to the drain is higher than the drain elevation. If the groundwater level in the model cell drops below the drain elevation, the drain stops working and will not inject water into the model. Two drain types have been incorporated in the model:

- **Land surface drains and major streams**: Drain boundaries have been applied to the top of the model covering the whole model area. The stage height equals the ground elevation using the Canterbury 1 m x 1m LiDAR data. This allows the model to determine where groundwater might seep out on the land surface (and is thus removed from the groundwater system) into localised low areas such wetlands and small ditches, but also simulates the effect of wider streams such as the Cam River in the southwest. Drain conductance is calculated from the cell size and an assumed hydraulic conductivity of 20 m/day.

- **Man-made open channels near the site**: within the model area these are all assumed to be gaining steams (i.e., groundwater-receiving) and do not discharge to groundwater. Because many of the open channels are relatively narrow, the LiDAR data is not refined enough to identify their drainage level. The ECan drain network GIS layer was used to identify their location, and their drainage level was estimated to be 0.7 m below the indicated LiDAR data. This was based on the difference between the

LiDAR data value and the surveyed height of the open channel to the southwest of the Box Drain site. Drain conductance is calculated from the cell size and an assumed hydraulic conductivity of 40 m/day.

It is acknowledged that this may not be accurate for smaller streams and drains and more accurate site-specific data would be required to better simulate the interaction between surface water and shallow groundwater. However, for the purpose of this study, which is assessment of the groundwater interaction with the proposed stormwater facility at the Box Drain site, the data used is considered sufficient.

7. Rainfall Recharge

The groundwater recharge (i.e., the land surface recharge, or net rainfall) is applied to all active cells in Layer 1, or to whatever the uppermost active cell is during calculations.

Groundwater recharge from rainfall is mainly determined by land use and soils type. Rushton (2006) describes a methodology to estimate groundwater recharge from a daily soil moisture balance. This method has been adopted to estimate rainfall recharge for in the model area. The Rushton (2006) soil moisture balance requires the following inputs:

- Rainfall runoff characteristics determined by the SCS curve number method (Soil Conservation Service, 1964 and 1972; Ritzema 2004).
- Proportion of rainfall that is stored near the surface (i.e., 'Fracstor' parameter as described in Rushton, 2006)
- Land use type, which includes crop or vegetation type (e.g., cultivated crops, native bush, or exotic forests, etc.) and sealed surface (e.g., roads, roofs, hardstand areas). The model area has only two main land use types, being grassland for farming and urban areas as shown in Figure A.1.
- Soil type and Profile Available Water (PAW). This has been derived from the soil moisture spatial layer in Canterbury Maps, as defined by Landcare Research. Predominant soil type in the area is a imperfectly drained Kaiapoi *ƒ* deep silt over sand.
- Crop factors and rooting depth. These have been based on FAO (1998) and on Irrigation NZ (2015).
- Daily rainfall and evapotranspiration records. Rainfall records from 2005 to 2023 have been taken from NIWA's CliFlo database for Threlkelds Rd weather station (site: 323,610), and evapotranspiration records from Christchurch Gardens weather station (no. 4858).

An overview of adopted parameters for the Rushton (2006) rainfall recharge estimations is listed in Table A.1.

Table 1. Estimations and parameter values for groundwater recharge from rainfall at Box Drain.

Land use type	Crop factor (-)	Profile available water (mm)	Rooting depth m)	SCS curve number, CN (-)	Proportion of rainfall stored near surface, Fracstor (mm)	Estimated average rainfall recharge (2005 – 2023) (mm/day)
Grassland	0.85	176	0.5	86	0.45	**0.37**
Urban areas	0.95	176	0.5	90	0.45	**0.28**

8. Groundwater Abstraction

There are multiple groundwater abstractions for irrigation, domestic, stockwater and public water supply across the area. Public water supply wells are mainly screened in the deeper aquifers, that are not part of

the model. However, two shallower public water supply wells from WDC are included in the model. Groundwater abstraction information from ECan's Wells Database has been incorporated for layer 4 (Riccarton Gravel Aquifer). In total 21 groundwater abstractions are listed as active in the ECan's Wells Database and shown in Figure A.1.

WSP notes that only the consented rate of take and consent annual volumes are available from ECan's Wells Database. There is no information on how much has actually been abstracted over the seasons from the wells. In the modelling WSP assumed that half the consented rate would be abstracted in an average year, and the full consented rate during a 'dry' year, when water demand would be the highest.

9. Aquifer Properties

Initial aquifer hydraulic properties have been obtained from the following sources:

- The calibrated Waimakariri-Selwyn groundwater model developed by GNS (Hemming et al 2018).
- Insitu hydraulic testing (i.e., falling and rising head testing) information at the CMUA site as described in Golder (2021).
- Literature values of hydraulic conductivities for various soil materials, including Kruseman & De Ridder (2000) and Freeze & Cherry (1979).

From the information sources listed above a range of hydraulic property values for each of the model layers has been derived and the best estimate applied to the model. During the model optimisation, the hydraulic property values have been further optimised (further discussed in the next section).

10. Calibration

As part of the calibration process, the model's parameter values are optimised. Model optimisation refers to a procedure to improve the model's ability to simulate recorded groundwater levels, by changing the model input parameters within an expected range of those parameters. When all model parameters have been considered in the model optimisation, and the model performance to simulate recorded groundwater levels across the model is sufficiently adequate, the model can be considered as calibrated.

The optimisation was done for steady-state conditions based on a groundwater level dataset from the three onsite shallow monitoring wells and of two ECan monitoring wells screened in the Riccarton Gravel Aquifer. Transient calibration was also attempted based on the groundwater level timeseries in the three onsite shallow monitoring wells.

WSP notes that the available data for model optimisation is very limited. This limits the accuracy of the model optimisation.

After completion of the model optimisation the optimised hydraulic parameters as listed in table A.2 were adopted and incorporated into the models used for scenario simulations, as described in the main text of this report.

Table A.2: Overview of optimised hydraulic parameter values for each hydrostratigraphic unit (HSU).

HSU no.	Formation	Kx (m/day) Optimized model value at Box Drain	Kz (m/day) Optimized model value at Box Drain	Sy (-) Optimised model value at Box Drain	Ss (-) Optimised model value at Box Drain
1	Christchurch Formation	0.3	0.015	0.07	7e-04
2	Riccarton Gravel Aquifer	0.3 – 508*	0.3 – 508	0.05	5e-06
Notes: *Hydraulic conductivity value from the PC7 model (Hemming et al 2018) was increased by 20%					

Model performance of the steady state simulation was evaluated by comparing the observed and modelled groundwater levels. The steady state calibration statistics are included in Table A.3. The summary statistics for the optimised model is listed. The Scaled Root Mean Square (SRMS) is the key parameter to consider, and this is 5% in the optimised model. This is in line with the 5% suggested by the Australian Groundwater Modelling Guidelines (AGMG) (Barnett et al 2012). The model is capable of sufficiently simulating shallow groundwater levels and flow within general area of the Box Drain area.

Table A.3: Groundwater model performance statistics.

Parameter	Optimised model
Residual Mean (m)	0.11
Absolute Residual Mean (m)	0.32
Residual Standard Deviation (m)	0.48
Sum of Squares (m^2)	1.24
Root Mean Square (RMS) Error (m)	0.50
Minimum Residual (m)	-0.39
Maximum Residual (m)	1.04
Number of Observations (-)	5
Range in Observations (m)	9.57
Scaled Residual Std. Deviation	5.1%
Scaled Absolute Residual Mean	3.4%
Scaled RMS Error	5.2%
Scaled Residual Mean	1.2%

A review of the groundwater balance (Table A.4) for the steady state model indicates the difference between water introduced to the model through the various simulated boundaries and water leaving the model through other boundaries is very similar. The steady state water balance error is 0.4 % for the whole model domain, which is small and indicates the model numerical calculations have converged to a numerically valid result.

Table A.4: Steady state groundwater model water balance.

Description	Inflow (m^3/day)	Outflow (m^3/day)
Recharge	8,891	-
Constant Head	7,011	2,686
Drain	-	11,271
Well	-	1,944
Total	15,901	15,901
Error	0.004%	

Transient calibration was also attempted, although it is acknowledged that the success is severely limited due to the lack of data on actual groundwater abstraction rates during the period for which groundwater level records are available (i.e., 2023-2025). Monthly 'stress periods' were set in the model, which allows for the response to monthly changes in rainfall recharge, groundwater abstraction and stage height of drainage features to be simulated. The total model run covers a period of two years (2023-2024).

WSP simulated the groundwater levels in the onsite monitoring wells for two different cases:

- **Average year case**: this case adopts the long-term (i.e., 2005-2023) average rainfall recharge for each calendar month, and assumes groundwater wells are active for 5 months (Nov-Mar) and pumped at half the consented rate.

- **Dry year case**: this case adopts a representative dry year rainfall recharge (i.e., 2023) for each calendar month, and assumes groundwater wells are active for 5 months (Nov-Mar) and pumped at the full consented rate.

Modelled and recorded groundwater level time series for the three onsite monitoring wells are included in Figure A.3 and A.4.

The model is capable of accurately simulating the general seasonal trends in groundwater levels. It also correctly simulates the relative difference in groundwater elevations between each of the monitoring well. However, short term fluctuations (daily, monthly and quarterly) are often not well simulated in either the average year case or the dry year case. This is due to the fact that only monthly changes are incorporated, thus daily fluctuate are not simulated. Furthermore, very limited groundwater abstraction data is available, and it is not known when exactly groundwater wells are pumped and at what rate.

Nonetheless, figures A.3 and A.4 suggest that notable drawdowns of the shallow groundwater table can be explained by seasonal changes in groundwater abstraction in combination with reduced rainfall recharge.

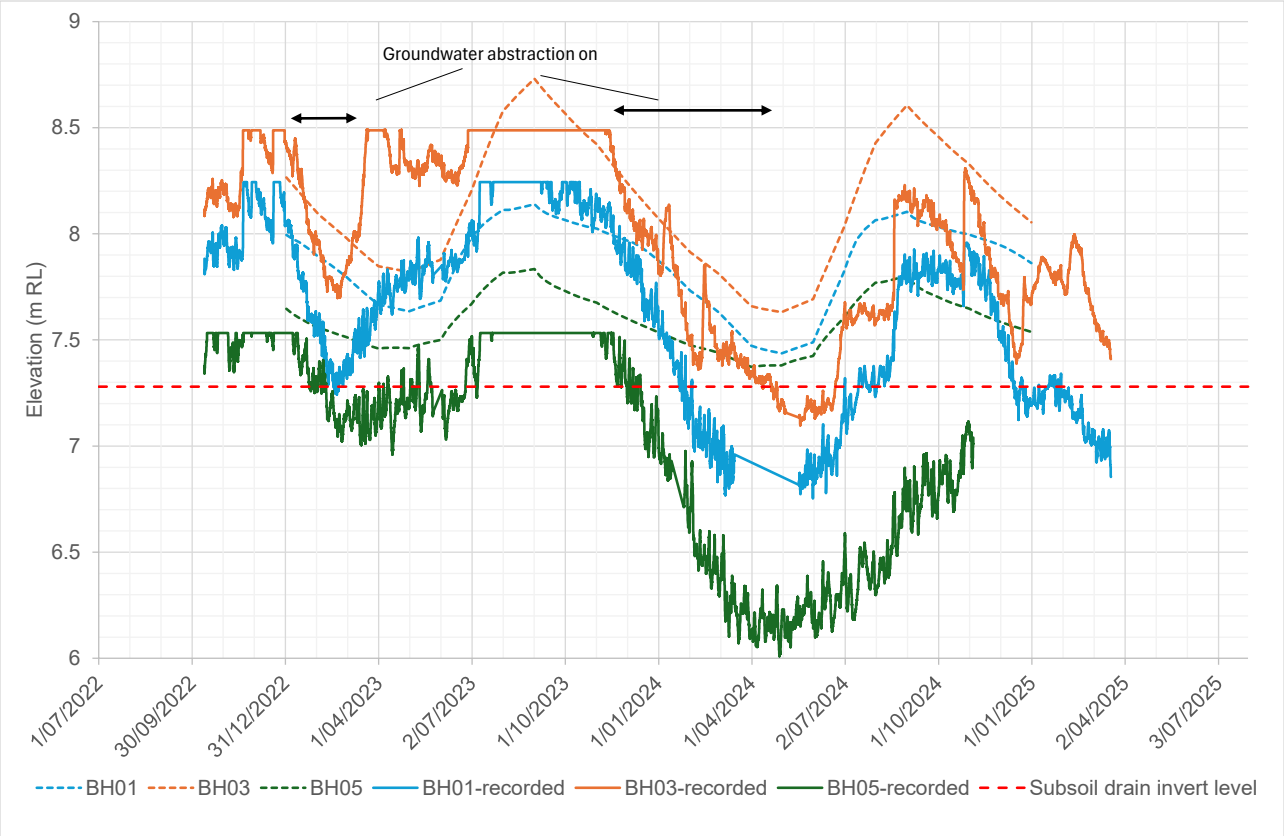

Figure A.2 Modelled versus recorded groundwater levels at Box Drain assuming an 'average year case'

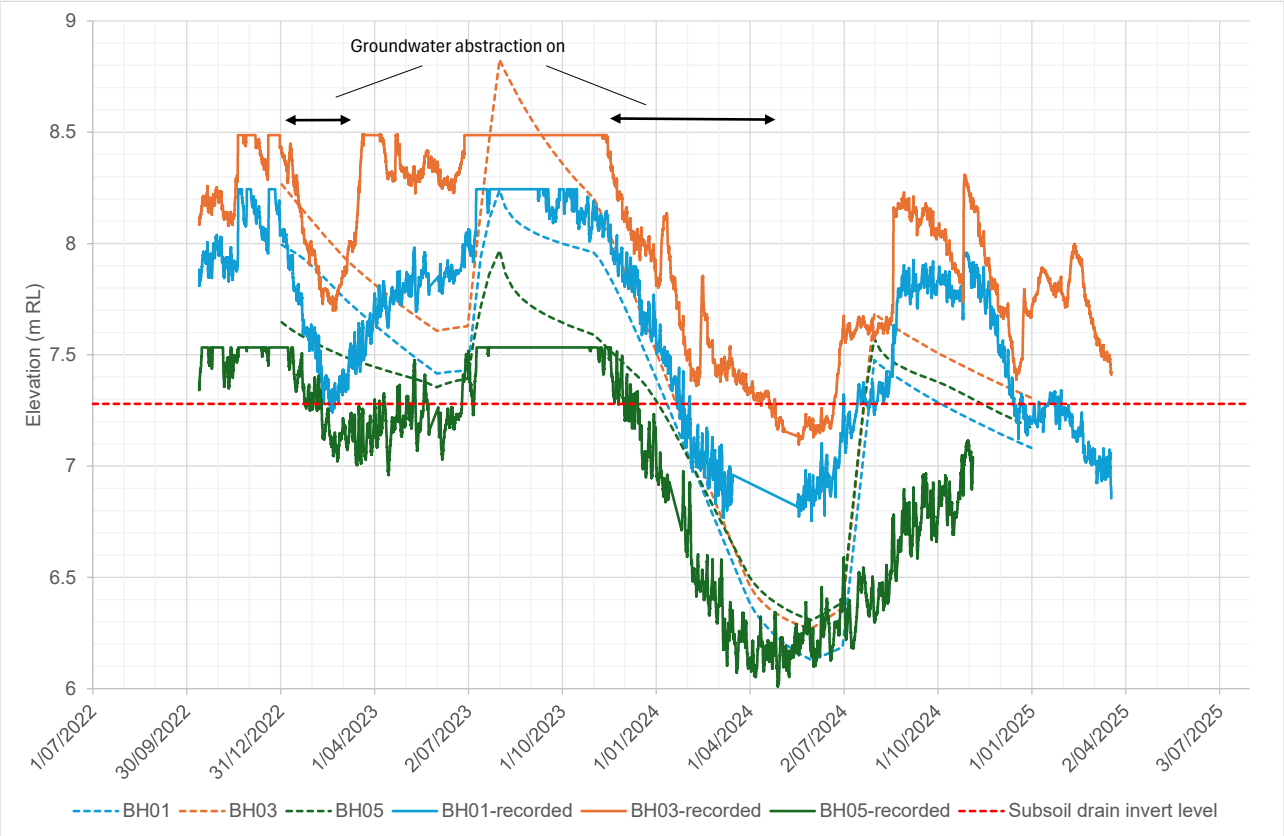

Figure A.3 Modelled versus recorded groundwater levels at Box Drain assuming an 'dry year case'

References

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WSP, 2025, Box Drain Hydrogeology, 24 June 2025, 3-C2673.00.

APPENDIX B

BOX DRAIN SURVEY OVERVIEW

NOTES:
1. ALL SURVEY AND ASSOCIATED DATA IS NZTM GD2000 (HORIZONTAL COORDINATES) AND NZVD 2016 (VERTICAL DATUM).
2. WAIMAKARIRI DISTRICT COUNCIL IS NOT RESPONSIBLE FOR EDITED OR REPRODUCED VERSIONS OF THIS DATA.

SURVEY EXTENTS

SW

GIBBS STREET

SCHOOLS ROAD

RANGIORA WOODEND ROAD

SITE PLAN
N.T.S

REV	REVISION DETAILS	DRN	CHK	APP	DATE
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DESIGNED	---	--/--/2020	DATE ISSUED	AS SHOWN
DESIGNED CHKD	---	--/--/2020	HORIZONTAL	NZTM GD2000
APPROVED	---	--/--/2020	VERTICAL	NZVD 2016

WAIMAKARIRI DISTRICT COUNCIL

PROJECT
WOODEND DRAIN SURVEY

SHEET TITLE
SURVEY OVERVIEW

FOR INFORMATION
NOT FOR CONSTRUCTION

DRAWING	
4475	
SHEET	REVISION
01	A

NOTES:
1. ALL SURVEY AND ASSOCIATED DATA IS NZTM GD2000 (HORIZONTAL COORDINATES) AND NZVD 2016 (VERTICAL DATUM).
2. WAIMAKARIRI DISTRICT COUNCIL IS NOT RESPONSIBLE FOR EDITED OR REPRODUCED VERSIONS OF THIS DATA.

SUMP 5
(SW005689)
LL: 9.338
IL: 8.458
OL: 8.488

SUMP 4
(SW018230)
LL: 9.384
OL: 8.734

DN225:
IL: 8.734
OL: 8.658

SUMP 3
(SW018231)
LL: 9.308
IL: 8.658
OL: 8.698

DN300
IL: 8.698
OL: 8.282

DN500
IL: 8.488
OL: 8.282

SUMP 1
(SW005687)
LL: 9.143
INV: 8.303

DN675

DN675
IL: 8.127

SUMP 2
(SW005688)
LL: 9.142
I1L: 8.282
I2L:8.282
OL: 8.127

KEY:
LL LID LEVEL
IL INLET INVERT LEVEL
OL OUTLET INVERT LEVEL
INV INVERT

2 0 4 8m
SCALE 1:200

SITE PLAN

REV	REVISION DETAILS	DRN	CHK	APP	DATE
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DESIGNED	---	--/--/2020	DATE ISSUED	AS SHOWN
DESIGNED CHKD	---	--/--/2020	HORIZONTAL	NZTM GD2000
APPROVED	---	--/--/2020	VERTICAL	NZVD 2016

WAIMAKARIRI DISTRICT COUNCIL

PROJECT
WOODEND DRAIN SURVEY

SHEET TITLE
GIBBS STREET SURVEY OVERVIEW

FOR INFORMATION
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DRAWING	REVISION
4475	
SHEET 02	A

NOTES:
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DN900
IL: 8.290
OL: 8.098

MANHOLE 2
(SW012137)
LL: 9.363
I1L: 8.703
OL: 8.703

MANHOLE 3
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I1L: 8.031
OL: 8.031

MANHOLE 1
(SW000237)
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OL: 8.107

MANHOLE 4
(SW010941)
LL: 9.411
INV: 8.121

MANHOLE 5
(SW011518)
LL: 9.448
INV: 8.098

SUMP 7
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OL: 8.908

DN300
IL: 8.538

DN300
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SUMP 8
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MANHOLE 7
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I1L: 8.704
I2L: 8.794
OL: 8.674

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IL: 8.577
OL: 8.538

DN300
OL: 8.704

KEY:
LL LID LEVEL
IL INLET INVERT LEVEL
OL OUTLET INVERT LEVEL
INV INVERT

SITE PLAN
N.T.S

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	FOR INFORMATION	KG	---	---	18/06/2024

SURVEYED	KG / CR	05/06/2024	PROJECT No	PD000296
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DESIGNED	---	--/--/2020	DATE ISSUED	AS SHOWN
DESIGNED CHKD	---	--/--/2020	HORIZONTAL	NZTM GD2000
APPROVED	---	--/--/2020	VERTICAL	NZVD 2016

WAIMAKARIRI DISTRICT COUNCIL

PROJECT
WOODEND DRAIN SURVEY

SHEET TITLE
RANGIORA WOODED ROAD SURVEY OVERVIEW

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DRAWING 4475
SHEET 03
REVISION A

NOTES:
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175

DN675

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DN525
OL: 8.304

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MANHOLE 8
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DN900
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OL:8.290

DN900
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OL: 8.098

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O2L: 7.306

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INV: 7.452

MANHOLE 12
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MANHOLE 10
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LL LID LEVEL
IL INLET INVERT LEVEL
OL OUTLET INVERT LEVEL
INV INVERT

SITE PLAN
N.T.S

REV	REVISION DETAILS	DRN	CHK	APP	DATE
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DESIGNED	---	--/--/2020	DATE ISSUED	AS SHOWN
DESIGNED CHKD	---	--/--/2020	HORIZONTAL	NZTM GD2000
APPROVED	---	--/--/2020	VERTICAL	NZVD 2016

WAIMAKARIRI DISTRICT COUNCIL

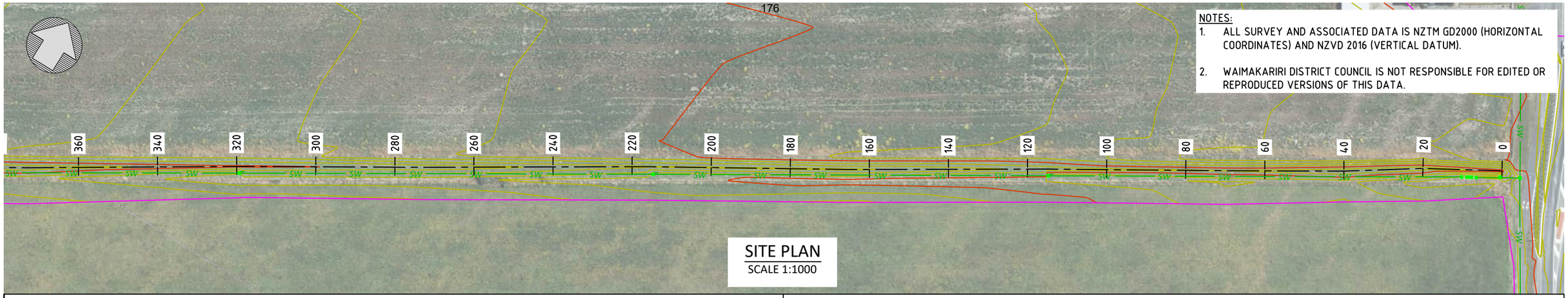
PROJECT
WOODEND DRAIN SURVEY

SHEET TITLE
65 RANGIORA WOODEND ROAD SURVEY OVERVIEW

FOR INFORMATION
NOT FOR CONSTRUCTION

DRAWING	
	4475
SHEET	REVISION
04	A

PLOT DATE: 27/06/2024 FILE: S:\PDU\PDU JOBS\PD000200-299\PD000296 - DRAINAGE GENERAL\WOODEND BOX DRAIN\BOX DRAIN USE.DWG



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SITE PLAN
SCALE 1:1000

Datum: 8.000

EXISTING GROUND	9.355	9.344	8.952	9.475	9.462	9.440	9.436	9.416
OFFSETS FROM CENTRE	-6.609	-2.466	0.000	2.710	3.728	6.171	8.298	10.000

CH 00.0

Datum: 6.000

EXISTING GROUND	8.825	8.829	8.874	8.982	8.725	9.112	9.110	9.089	9.084
OFFSETS FROM CENTRE	-8.331	-8.263	-6.736	-2.007	0.000	2.914	3.954	6.647	10.000

CH 150.0

Datum: 8.000

EXISTING GROUND	9.112	9.166	9.078	8.831	9.213	9.370	9.338	9.335	9.332
OFFSETS FROM CENTRE	-8.028	-4.756	-1.884	0.000	2.007	3.034	4.469	7.353	10.000

CH 50.0

Datum: 6.000

EXISTING GROUND	8.830	8.913	8.993	8.874	8.684	8.870	9.031	9.021	9.017
OFFSETS FROM CENTRE	-8.411	-6.744	-3.272	-1.335	0.000	1.653	5.605	6.854	10.000

CH 200.0

Datum: 8.000

EXISTING GROUND	9.012	9.030	9.137	9.075	8.853	9.011	9.199	9.188	9.161	9.160
OFFSETS FROM CENTRE	-8.405	-6.504	-2.994	-1.129	0.000	1.033	2.890	7.967	9.155	10.000

CH 100.0

Datum: 6.000

EXISTING GROUND	8.760	8.807	8.907	8.707	8.594	8.915	8.928	8.913	8.911
OFFSETS FROM CENTRE	-8.281	-6.254	-3.278	-1.399	0.000	2.619	4.423	6.970	10.000

CH 250.0

CROSS SECTIONS
SCALE 1:200

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	FOR INFORMATION	KG	---	---	18/06/2024

SURVEYED	KG / CR	05/06/2024	PROJECT No	PD000296
DRAWN	KG	20/06/2024	CON No	CON2020--
DRAWING CHKD	---	--/--/2020	SCALE (A3)	AS SHOWN
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APPROVED	---	--/--/2020	VERTICAL	NZVD 2016

WAIMAKARIRI DISTRICT COUNCIL

PROJECT: WOODEND DRAIN SURVEY

SHEET TITLE: CROSS SECTIONS

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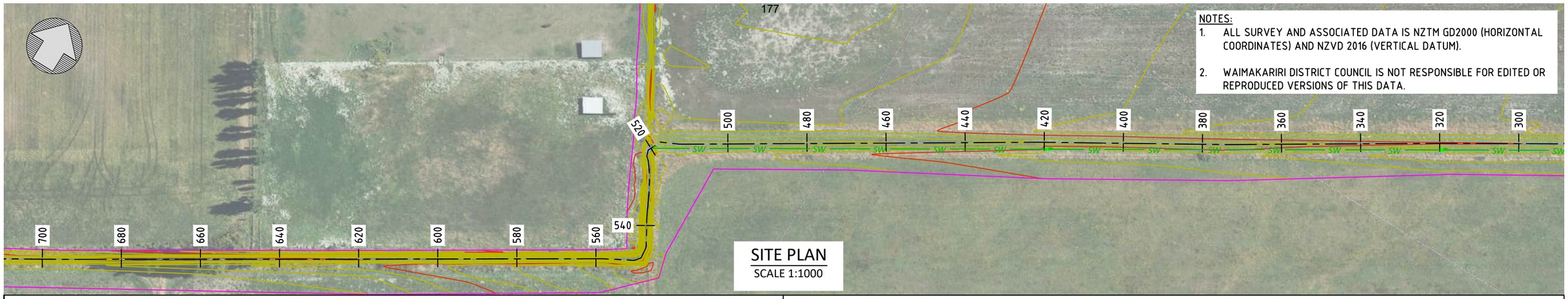
SHEET 05

REVISION A



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SITE PLAN
SCALE 1:1000

Datum: 6.000

EXISTING GROUND	8.674	8.740	8.870	8.735	8.499	8.650	8.795	8.785	8.808	8.806
OFFSETS FROM CENTRE	-7.949	-5.971	-3.180	-1.910	0.000	1.461	2.588	4.367	6.604	10.000

CH 300.0

Datum: 6.000

EXISTING GROUND	8.420	8.474	8.543	8.410	8.219	8.364	8.488	8.466	8.473	8.459
OFFSETS FROM CENTRE	-7.712	-5.263	-2.892	-1.678	0.000	1.914	3.031	5.080	7.723	10.000

CH 450.0

Datum: 6.000

EXISTING GROUND	8.612	8.667	8.717	8.391	8.620	8.731	8.748	8.711	8.707
OFFSETS FROM CENTRE	-8.596	-5.000	-2.239	0.000	1.765	2.836	4.507	7.327	10.000

CH 350.0

Datum: 6.000

EXISTING GROUND	8.318	8.330	8.260	8.155	8.346	8.403	8.382
OFFSETS FROM CENTRE	-6.347	-5.929	-1.780	0.000	2.442	5.106	10.000

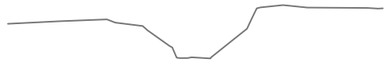
CH 500.0

Datum: 6.000

EXISTING GROUND	8.531	8.573	8.630	8.310	8.482	8.662	8.631	8.601	8.599
OFFSETS FROM CENTRE	-9.153	-6.425	-2.027	0.000	1.551	2.928	5.764	8.008	10.000

CH 400.0

CROSS SECTIONS
SCALE 1:200



Datum: 6.000

EXISTING GROUND	8.385	8.472	8.424	8.172	7.267	7.865	8.995	8.904	8.888	
OFFSETS FROM CENTRE	-5.865	-4.150	-2.357	-1.309	0.000	1.485	3.006	4.766	4.941	

CH 550.0

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	FOR INFORMATION	KG	---	---	18/06/2024

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DESIGNED CHKD	---	--/--/2020	HORIZONTAL NZTM GD2000
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PROJECT
WOODEND DRAIN SURVEY

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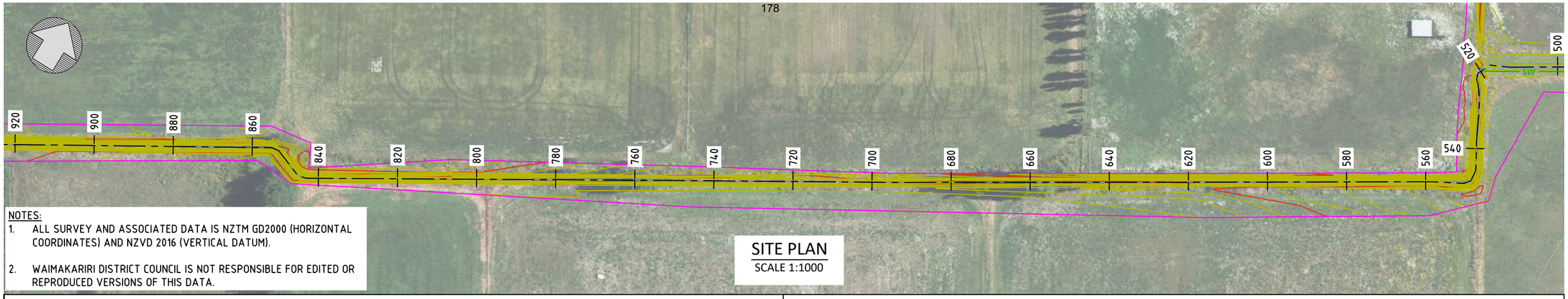

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SITE PLAN
SCALE 1:1000

Datum: 6.000

EXISTING GROUND	7.858	7.940	8.059	8.077	8.028	7.068	8.131	8.394
OFFSETS FROM CENTRE	-8.833	-5.318	-3.656	-2.542	-1.260	0.000	1.223	2.212

CH 600.0

Datum: 6.000

EXISTING GROUND	7.619	7.626	7.621	7.578	6.832	7.504	7.682	7.692
OFFSETS FROM CENTRE	-6.431	-6.305	-3.719	-1.007	0.000	1.246	3.503	3.702

CH 750.0

Datum: 6.000

EXISTING GROUND	7.702	7.659	7.796	7.787	6.955	8.071	8.103
OFFSETS FROM CENTRE	-8.199	-6.692	-2.922	-1.246	0.000	1.333	2.230

CH 650.0

Datum: 6.000

EXISTING GROUND	7.698	7.781	7.654	6.739	8.007	8.167	
OFFSETS FROM CENTRE	-3.833	-2.158	-1.003	0.000	1.724	4.774	

CH 800.0

Datum: 6.000

EXISTING GROUND	7.693	7.692	7.619	7.750	6.868	7.825	7.900	
OFFSETS FROM CENTRE	-7.157	-6.863	-3.470	-1.422	0.000	2.108	2.404	

CH 700.0

Datum: 6.000

EXISTING GROUND	7.823	7.809	7.279	6.677	7.481	7.929	7.856	7.865
OFFSETS FROM CENTRE	-4.291	-2.867	-1.060	0.000	1.160	3.999	6.921	7.482

CH 850.0

CROSS SECTIONS
SCALE 1:200

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	FOR INFORMATION	KG	---	---	18/06/2024

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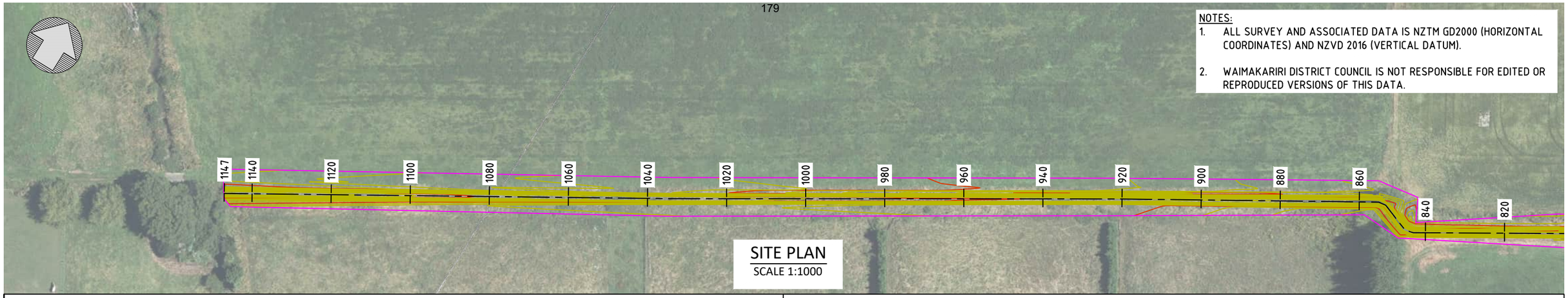

SITE PLAN
SCALE 1:1000

Datum: 6.000

EXISTING GROUND	7.597	7.268	6.573	7.892	7.666	7.669
OFFSETS FROM CENTRE	-3.900	-1.206	0.000	1.285	2.795	5.296

CH 900.0

Datum: 6.000

EXISTING GROUND	7.279	6.997	6.229	7.330	7.298	7.347	7.333
OFFSETS FROM CENTRE	-4.285	-1.062	0.000	1.475	2.477	5.088	5.450

CH 1050.0

Datum: 6.000

EXISTING GROUND	7.430	7.451	7.329	6.491	7.857	7.514	7.536	
OFFSETS FROM CENTRE	-4.280	-3.564	-1.309	0.000	1.322	2.804	5.265	

CH 950.0

Datum: 4.000

EXISTING GROUND	7.235	7.268	6.863	5.891	6.692	7.255	7.247	7.191
OFFSETS FROM CENTRE	-3.768	-2.620	-1.349	0.000	1.196	2.699	4.324	5.805

CH 1100.0

Datum: 6.000

EXISTING GROUND	7.349	7.405	7.157	6.399	7.292	7.409	7.439	7.442
OFFSETS FROM CENTRE	-4.371	-2.425	-1.107	0.000	1.054	2.226	4.626	5.306

CH 1000.0

CROSS SECTIONS
SCALE 1:200

Datum: 4.000

EXISTING GROUND	7.196	7.197	6.745	5.592	6.901	7.159	7.066
OFFSETS FROM CENTRE	-3.311	-3.281	-1.603	0.000	1.657	3.545	6.119

CH 1144.2

REV	REVISION DETAILS	DRN	CHK	APP	DATE
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PLOT DATE: 27/06/2024 FILE: S:\PDU\PDU JOBS\PD000200-299\PD000296 - DRAINAGE GENERAL\WOODEND BOX DRAIN\BOX DRAIN USE.DWG

A.5 WDC HYDRAULIC MODELLING STUDY

Woodend Box Drain Stormwater Treatment Facility

Box Drain Hydraulic Feasibility Modelling

Prepared by Waimakariri District Council
07 October 2025

Prepared for:	Tom Parsons	Director at Storm Environmental
Prepared by:	Quinn Ledgerwood-Gee	Graduate Engineer
Reviewed by:	Chris Bacon	Network Planning Team Leader
Approved by:	Chris Bacon Tom Parsons	Network Planning Team Leader Director at Storm Environmental

on behalf of Project Delivery Unit, Waimakariri District Council

PDU Project Number: PD002201

Published: 28 August 2025

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1	Quinn Ledgerwood-Gee	First Draft for Chris's Review	30 July 2025
2	Quinn Ledgerwood-Gee	Second Draft for Review	04 August 2025
3	Quinn Ledgerwood-Gee	Third Draft for Review	21 August 2025
4	Quinn Ledgerwood-Gee	Approved Version	28 August 2025
5	Quinn Ledgerwood-Gee	Update to Approved Version	07 October 2025

1. Executive Summary

With the purchase of 65-65a Rangiora Woodend Road a stormwater treatment facility has been proposed in this land. The options assessment for this facility has been completed providing a preferred option for the new stormwater infrastructure which this report will examine. In addition to this an adverse scenario has been observed at Box Drain resulting in an increased water level in Box Drain's pipe outlet. Due to this discovery, work also needs to be conducted to gauge its potential impacts on Box Drains function and the preferred stormwater option.

Before examining the proposed stormwater infrastructure, the impacts of an adverse flow scenario in Box Drain needed to be examined. To do this, various methods were trialled to induce an increased water level at the Box Drain pipe outlet similar to that indicated in reality. This found the best method to induce this adverse effect with the introduction of an inflow to node of 0.765 m^3/s at the node immediately following the final node of Box Drain.

The next stage involved digitising the infrastructure in MIKE+ and verifying that the model is functioning as intended. Upon the completion of this the model was used to run a range of storm events through the model with the new infrastructure. This found that in all cases ranging from 1 in 5-year to 1 in 200-year storm events the infrastructure was able to attenuate the flow. For the 1 in 200-year event this reduces the peak flow out of box drain from approximately 1.47 m^3/s to 0.26 m^3/s and for the 25mm rainfall event from 0.53 m^3/s to 0.03 m^3/s.

The impact of the adverse condition on the function of the new infrastructure was also examined. This found that an impact could only be seen in the 50 and 200-year events, and that impact though visible in the graphs was negligible.

The inflows, outflows, and levels of the first flush basin and wetland were examined in storm events and are provided as graphs in this report. In addition to this the impact on surface flooding along Gibbs Drive was examined and this found that a notable reduction was seen in the 25mm and 1 in 5-year 2-hour events, and a small reduction was seen in the 50y and 200y 2-hour events.

It is recommended that:

- This report is provided to the interested parties including the WDC stormwater asset manager and consultants designing the new pond infrastructure.
- Results of this report be used to inform the feasibility of the preferred option for the stormwater infrastructure.
- Any changes to the preferred option for the stormwater infrastructure are run through the same model to check their feasibility.

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Table of Contents

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2. Introduction and Background

With the recent purchase of 65-65a Rangiora Woodend Road (Figure 1) a stormwater treatment facility has been proposed in this land. The options assessment for the preferred option has been completed, and now the feasibility of this preferred option needs to be considered. Modelling has been conducted for the existing infrastructure in Box Drain and the preferred option to assess the performance of the proposed solution and any impacts upstream.

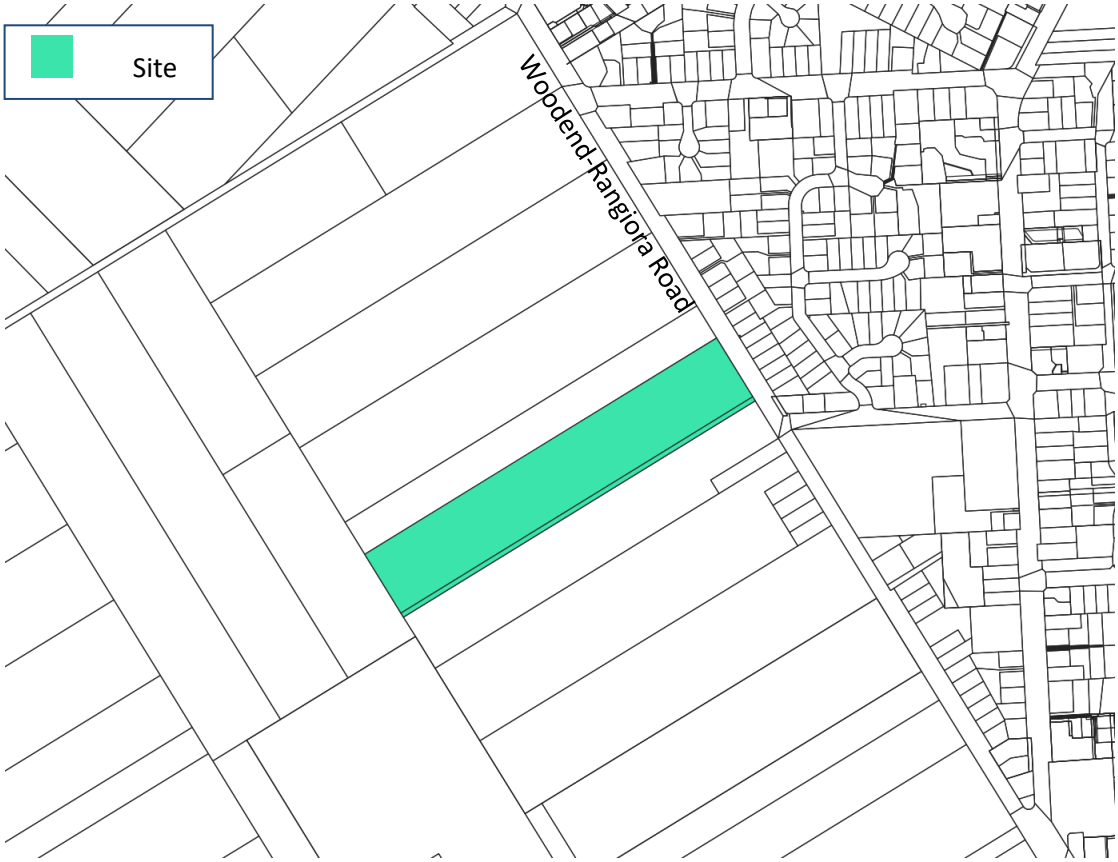

Figure 1: Site location.

The design for the Box Drain wetland consists of the following:

- Existing GPT (Gross Pollutant Trap)
- The bypass/inlet structure with an overflow weir into the piped section of Box Drain
- The existing pipe as a bypass
- A first flush basin with an outlet structure
- A wetland with outlet structures with backflow prevention returning to Box Drain.

An overview of this layout can be seen below in Figure 2.

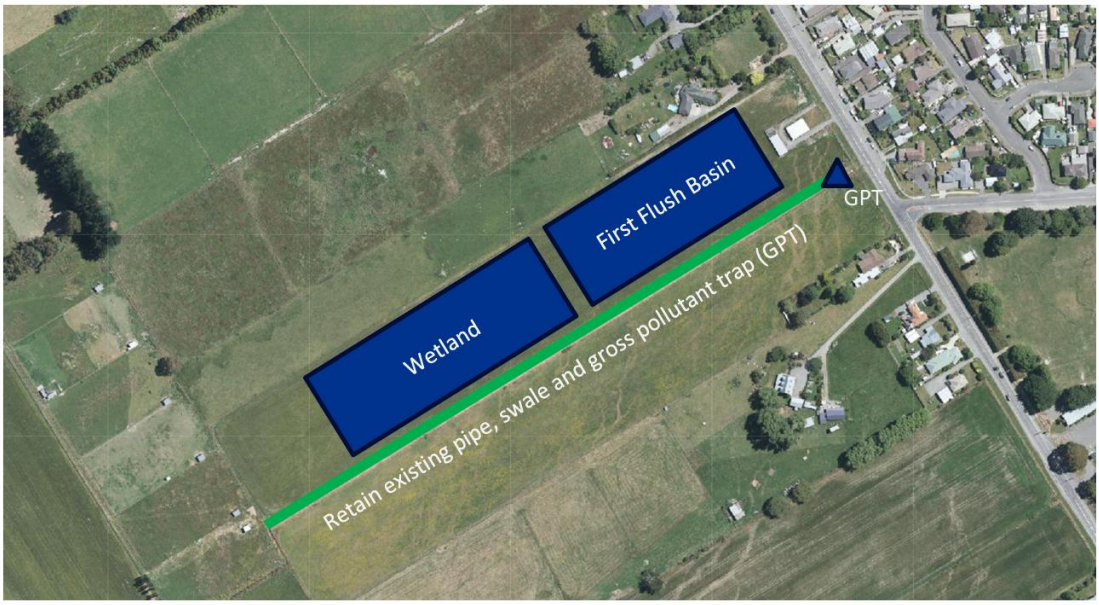

Figure 2: Proposed infrastructure design for the Box Drain wetland.

Upon the digitization of these modelling will be conducted to examine a range of storm events considering both a typical and adverse downstream boundary condition. These results will then be assessed and compared to the results with the existing infrastructure.

3. Adverse Tailwater Scenario Modelling

Following recent site inspections, it was found that the water level at the outlet of the existing Box Drain piped network can be elevated for sustained periods (Figure 3). These levels are higher than modelled in the base stormwater model used for this exercise. Due to this, changes need to be made to the base model to test the impacts caused by this 'adverse tailwater' scenario.

Figure 3: Indication of elevated water levels in the Box Drain pipe network outlet.

To model this, a method needed to be found which would hold the water level at the box drain outlet high enough without causing instabilities in the model. Once this method has been found modelling needs to be conducted to test the proposed infrastructure under this adverse scenario.

3.1. Adverse Tailwater Modelling Methodology

This modelling exercise was conducted using the DHI Woodend stormwater model, as was initially contracted to DHI to build—the base model is shown below in Figure 4. This diameter of the Box Drain pipe outlet was 0.675 m, and the 'adverse tailwater' water level was assumed to be at three quarters of this diameter. To raise the water and hold it at this level the following methods were considered in order of assumed feasibility:

1. Apply inflow to node boundary condition.
2. Apply initial condition to model with flow in Box Drain.
3. Introduce additional baseflow in the channel following the outlet.
4. Increase roughness of the downstream waterway to back up water at the outlet.
5. Combination of the above.

The methods would be examined in the order above running from most to least feasible. Once an appropriate method had been found this would need to be run with a range of stormwater events. The events examined

have been determined in the "Box Drain – Feasibility Hydraulic Modelling Scope" document. The events examined range from 20% AEP (Annual exceedance probability) to 0.5% AEP and cover present climate state (HIRDS Woodend Gladstone historical data) and future climate state (HIRDS4 Woodend Gladstone RCP8.5 2081-2100 Climate Scenario). A summary of the storm events examined is shown below in Table 1.

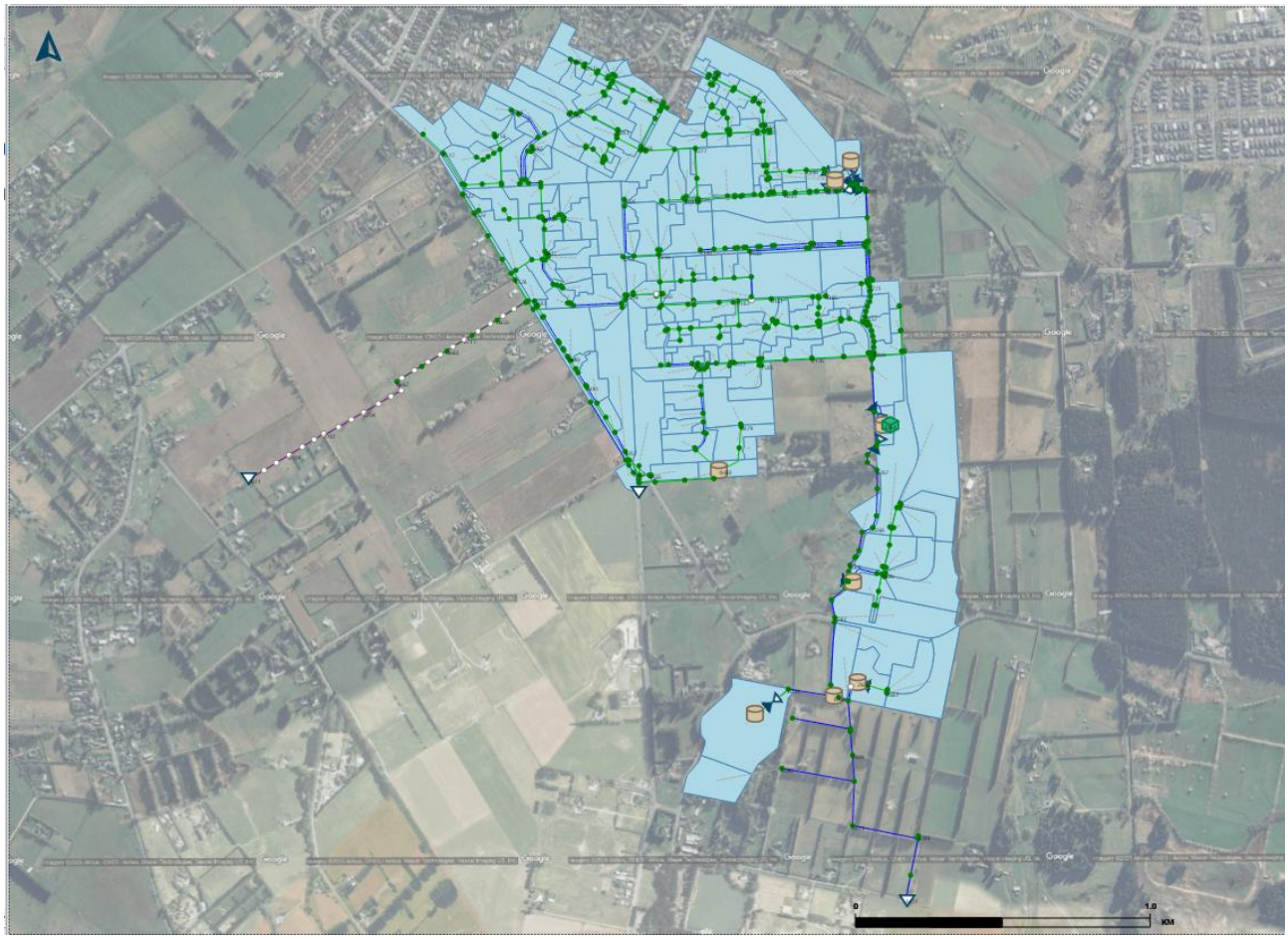

Figure 4: Box Drain base model.

Table 1: Scenarios modelled with the 'adverse tailwater' scenario.

Batch	Scenarios			Rainfall durations required			
	Climate	Development	Groundwater/ tailwater conditions	25mm Event	20% AEP	2% AEP	0.5% AEP
1	Present Climate	Existing development, existing infrastructure	Adverse conditions	2hr	2hr	2hr, 3hr	2hr
2	Future Climate	Existing development, existing infrastructure	Adverse conditions	2hr	2hr	2hr, 3hr	2hr

3.2. Adverse Tailwater Modelling Results

3.2.1. Applying an inflow to the node boundary

The first method examined was applying an inflow to node boundary condition at the first node following the outlet of Box Drain. This node was chosen to avoid instability within box drain while not generating the flow so far forward as to need excessive additional flows added to the model. This method took approximately 30 minutes modelled time to stabilize and seemed to hold for a modelled 6-hour duration run without any significant instability. This indicated that this method would be adequate to use for holding the 'adverse tailwater' scenario in Box Drain.

Using this method, a flow would need to be found which would hold the level of the outlet at three quarters of its diameter. After multiple trials, this flow was found to be 0.765 m^3/s and the levels in box drain are shown below in Figure 5.

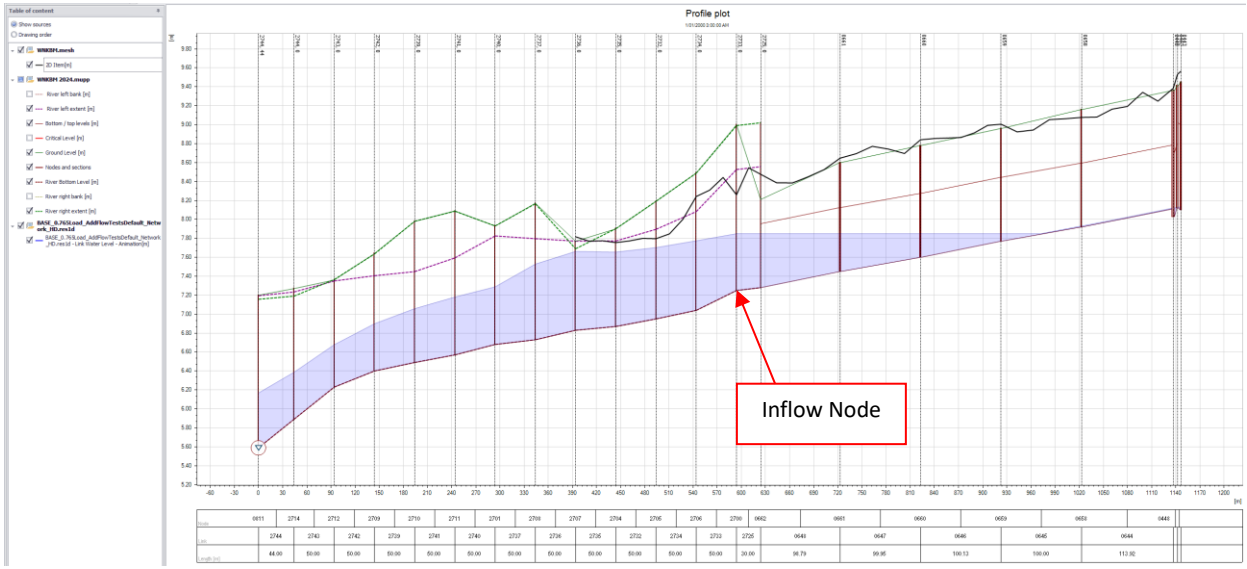

Figure 5: Stabilized water levels in Box Drain using a 0.765 m^3/s inflow to node.

3.2.2. Increasing the Roughness of the Downstream Channel

An alternative method was also trialled based on observed groundwater flow of 0.050 m^3/s while altering the roughness for the downstream section of the drain. Modelling this with a range of Manning's M Values (1/Mann N) showed that with a 0.050 m^3/s inflow the adverse tailwater conditions cannot be reached. Figure 6 below shows that only 0.09 m of the outlet fills with a 0.050 m^3/s inflow, and the channel roughness has an insignificant impact on this elevation.

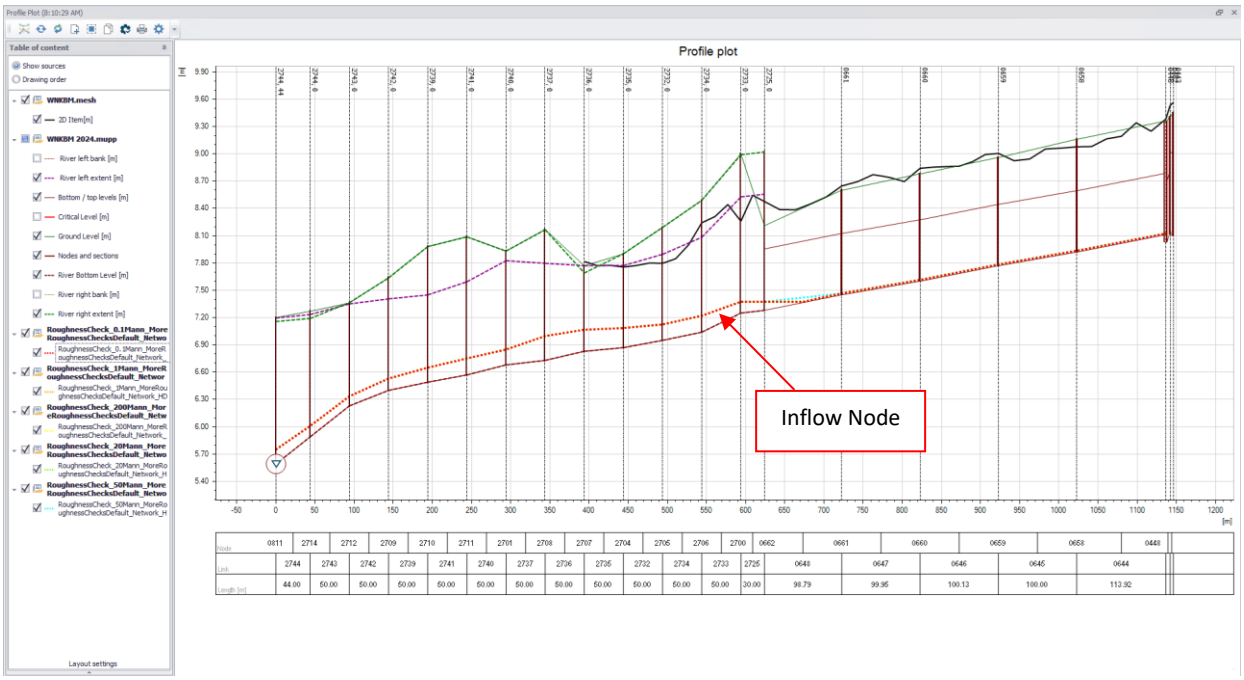

Figure 6: Comparison of maximum water levels in Box Drain with varying Manning's M values (dotted lines).

Based on the outcomes from applying a 0.765 m^3/s boundary flow condition and the alternative trial adjusting roughness it was determined that applying a 0.765 m^3/s boundary condition was the most appropriate method to simulate the observed adverse tailwater condition. With an adequate method found to create the 'adverse tailwater' scenario, modelling different stormwater events could be conducted.

3.2.3. Storm Event Modelling

Stormwater modelling was conducted using future state and present state rainfall scenarios. For the future state scenarios, events were based on the WDC's (Waimakariri District Council) urban rainfall profiles using HIRDS4 RCP8.5 scenario data. For present state scenarios, events were based on the WDC urban rainfall profiles using the HIRDS4 historical data. These results were compared to the equivalent events to understand the impact of the 'adverse tailwater' scenario on the network. A comparison between the 1 in 5-year 2-hour events, 1 in 50-year 2-hour events, and 1 in 200-year 2-hour events for the future rainfall scenarios are shown below in Figures 7, 8, and 9, respectively.

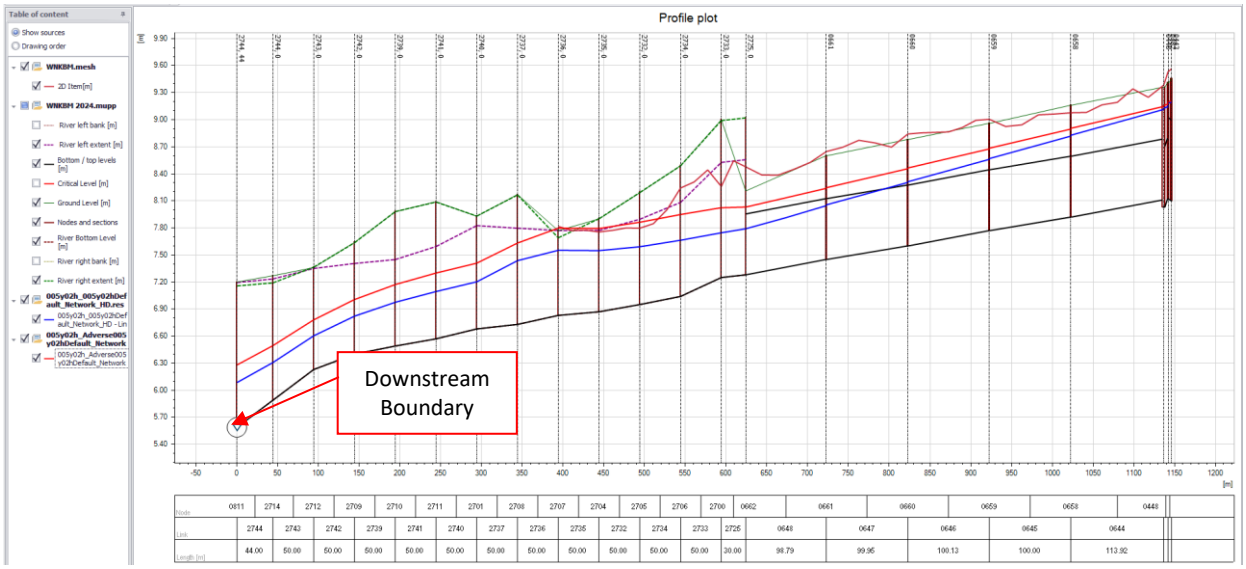

Figure 7: Comparison between the 1 in 5-year 2-hour rainfall event with 'adverse tailwater' (red line) and without (blue line).

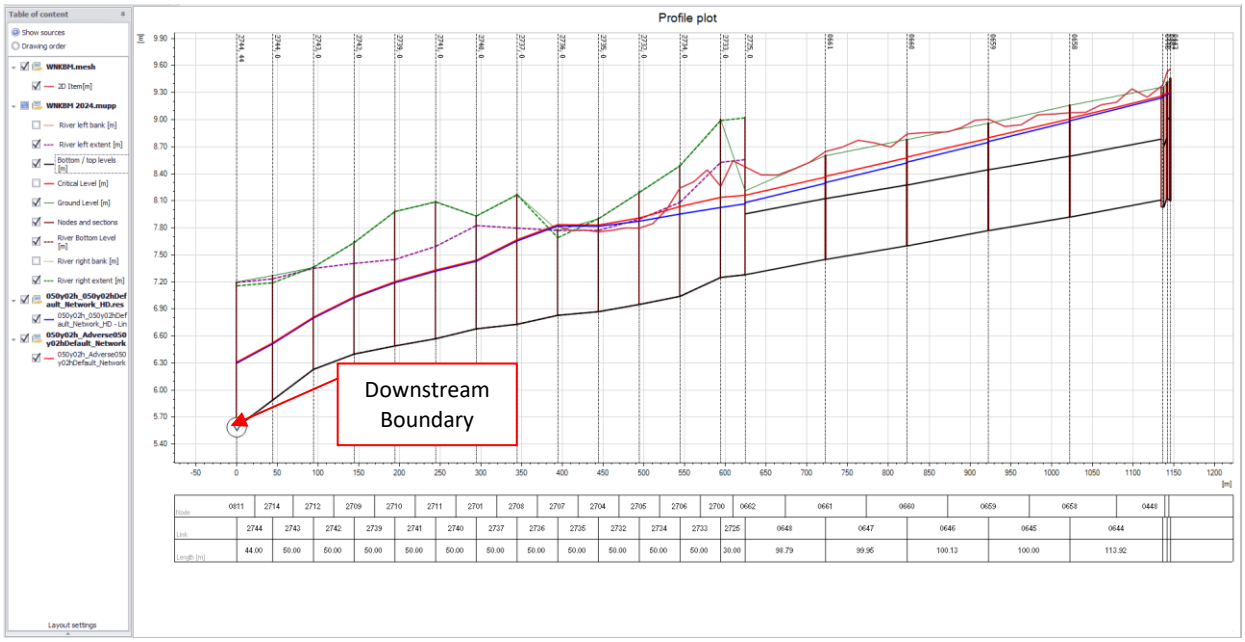

Figure 8: Comparison between the 1 in 50-year 2-hour rainfall event with 'adverse tailwater' (red line) and without (blue line).

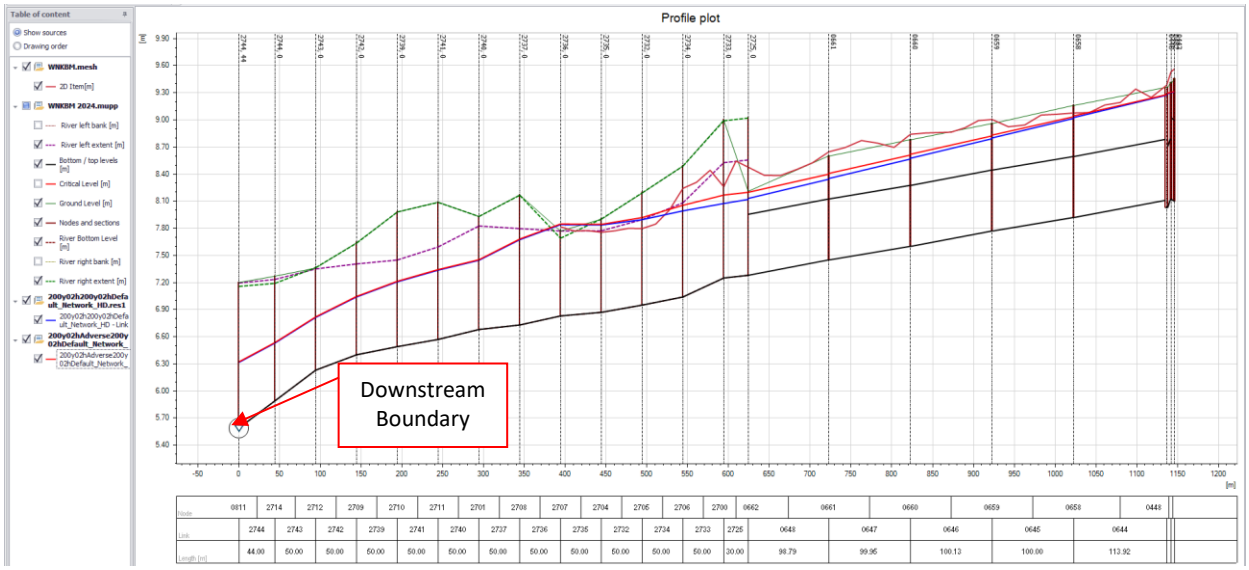

Figure 9: Comparison between the 1 in 200-year 2-hour rainfall event with 'adverse tailwater' (red line) and without (blue line).

These figures show that in all scenarios an increase in HGL (Hydraulic Grade Line) can be seen at the start of the piped section of Box Drain (at node 0662), but nearing Rangiora Woodend Road this difference is minimal in all scenarios, and the difference decreases at a faster rate in more intense rain events. Full results for each scenario can be found in Appendix A.

The differences ranging from the 5-year to the 200-year 2-hour rainfall events shows similar levels in the downstream drain between all events. The flows out of the pipe and drain section of Box Drain and at the Outlet of Box Drain are detailed below in Table 2.

Table 2: Summary of flow results in Box Drain with losses and gains from surrounding lane after Box Drain's outlet.

Event	Peak Time	Box Drain Pipe Flow (m^3/s)	Box Drain Swale Flow (m^3/s)	Adverse Inflow (m^3/s) (added at pipe outlet)	Total Box Drain Flow (pipe + swale + Adverse inflow)	Outlet Flow (m^3/s)	Loss/Gain (m^3/s)
25mm Event	1/01/2000 1:38	0.37420	0.15927	0.765	1.29847	1.13080	-0.16767
005y02h Present	1/01/2000 1:36	0.37307	0.14674	0.765	1.28481	1.12872	-0.15609
005y02h Future	1/01/2000 1:39	0.37527	0.16907	0.765	1.30934	1.13250	-0.17684
050y02h Present	1/01/2000 1:50	0.37186	0.57161	0.765	1.70847	1.18368	-0.52479
050y02h Future	1/01/2000 1:45	0.36967	0.88866	0.765	2.02333	1.23228	-0.79105
050y03h Present	1/01/2000 2:25	0.38586	0.56206	0.765	1.71292	1.18967	-0.52325
050y03h Future	1/01/2000 2:25	0.38711	0.72979	0.765	1.88190	1.22300	-0.65890
200y02h Present	1/01/2000 1:43	0.37130	0.95078	0.765	2.08709	1.24227	-0.84482
200y02h Future	1/01/2000 1:39	0.36979	1.09735	0.765	2.23214	1.26817	-0.96397

This shows that in all cases downstream of the pipe outlet there is some water in Box Drain spilling into the surrounding terrain. In addition to this, the capacity of the existing pipeline is around 0.38 m^3/s and any additional flow in Box Drain is simply diverted to the swale section. The peak flow is verified using the Darcy-Weisbach equation with an assumed friction factor of f = 0.02 shown in the equations below.

$$V = \sqrt{\frac{2\Delta H g D}{f L}} = \sqrt{\frac{2 * 0.19 * 9.81 * 0.675}{0.02 * 98.79}} = 1.13 \frac{m}{s}$$

$$Q = \pi * \left(\frac{D}{2}\right)^2 * v = \pi * \left(\frac{0.675}{2}\right)^2 * 1.13 = 0.40 \frac{m^3}{s}$$

This results in a similar value indicating appropriate function of the Box Drain piped section.

Other key findings from this analysis are that the 25 mm 'first flush' event sits between the future state 005y02h and present state 005y02h rainfall events. It is also found through comparisons of the 050y03h and 050y02h rainfall events that for future state the 2-hour event shows a peakier and more adverse response, though in present state the responses are similar. This indicates that the 2-hour event should be used when analysing the system as it will provide the most intense event for each ARI (average return interval).

3.3. Adverse Tailwater Conclusions

These results show that the inflow to node boundary condition method for modelling the adverse tailwater scenario is adequate and will not result in model instabilities. The results also shows that the 'adverse tailwater' scenario does not lead to any notable differences upstream when compared to the scenario without, although; it still successfully impacts the water levels along box drain and should be included for

modelling the preferred solution. Going forward this method should be used to model the ‘adverse tailwater’ scenario with the wetland design so its impacts can be gauged.

In addition to this more work could be considered to examine the impacts of the water spilling out of the channel following the pipe outlet in box drain and its impact on flooding on the surrounding surfaces.

4. Box Drain MIKE+ Infrastructure Modelling Methodology

4.1. Gross Pollutant Trap

The gross pollutant trap has been modelled as a node with a basin geometry for the Ecosol GPT and is connected on the Box Drain pipeline after the pipe and swale sections divert. The box drain pipe then continues from this node to the next manhole where the new infrastructure connects.

4.2. Bypass/Inlet Structure with Overflow Weir

This overflow weir has been specified as a sharp crested weir in the first manhole following the gross pollutant trap. This weir will have a full width of 1050 mm and crest level of 8.56 m RL. This weir will overflow into the existing Box Drain pipe and primarily direct flow into the first flush basin. This has been modelled in MIKE+ using a weir between manholes with the aforementioned crest width and level. The weir is directly connected into a manhole which connects to the Box Drain pipe and there is a pipe connecting from the first manhole with the weir into the first flush basin, where flow will primarily be directed. This infrastructure can be seen in the MIKE+ model in Figure 11, below.

4.3. First Flush Basin and Outfall Structure

The first flush basin is specified to have an upstream invert at 8.06 m RL, downstream invert at 7.9 m RL, base length of 215 m, base width of 62 m, side slope of 1V:4H, and an operating volume of 4,550 m^3. The outlet structure is specified to pipe from the first flush basin into the wetlands using DN675 pipes with outlet levels of 7.95 m RL. This can be seen immediately below in Figure 10.

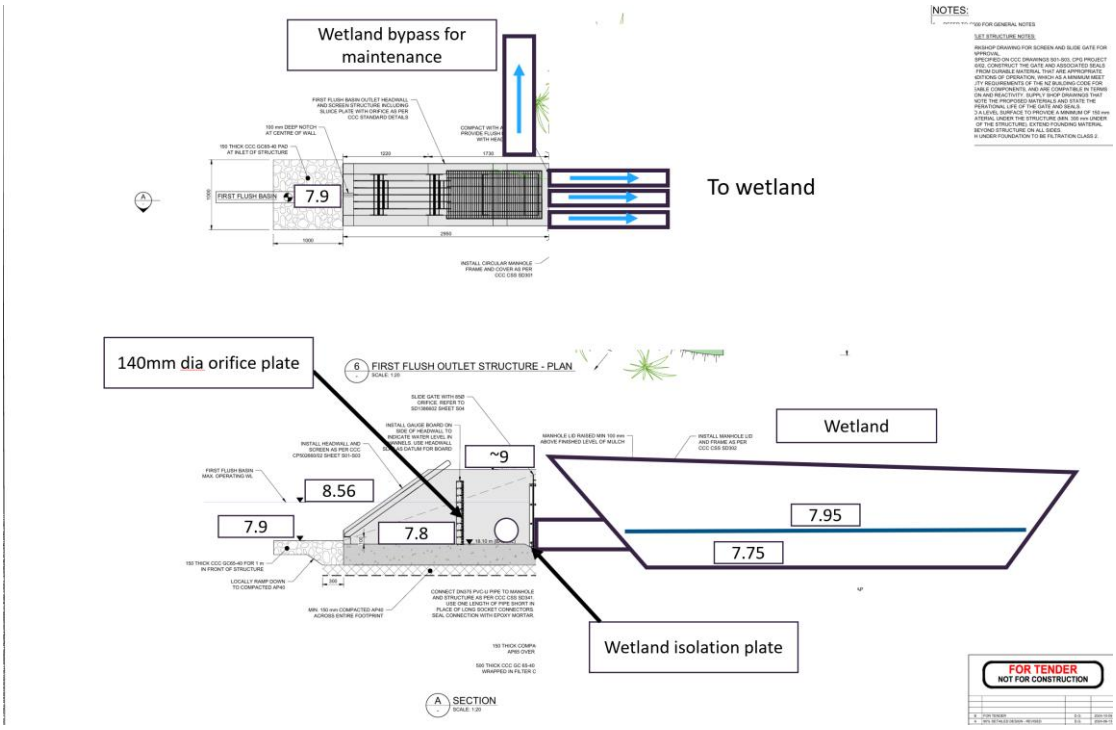

Figure 10: Wetland and Outlet Design Information.

Modelling the first flush basin in MIKE+ used a basin node with a custom geometry based on the aforementioned slopes, length, and width. The absolute top level for the basin was 9.0 m RL based on the existing ground level on site. This node is then connected to a circular orifice with a 140 mm diameter which is directly connected to the wetland. The orifice is able to be directly connected to the wetland rather than a

pipe between the two as the system will be hydraulically governed by this weir with minimal impact from any following pipe. This infrastructure in the MIKE+ model can be seen below in Figure 11.

4.4. Wetland and Outfall Structures

The wetland design has not been completed, but it is likely to consist of 1-3 parallel cells. The cell(s) will have an invert of 7.75 m RL with typical operating levels between 7.8 to 7.95 m RL. The total detention volume of the wetland is 6,070 m^3. The wetland will discharge to the first manhole upstream of the Box Drain pipe outlet through a Cipolletti weir. This weir will be built into the walls of 1,050 mm manhole. The invert of the notch will have a diameter of 130 mm and a height of 7.845 mm RL. The notch will be 150 mm deep and have side slopes of 0.25:1 (205 mm width at the top of the manhole). The manhole lid will then overflow from the basin at 7.995 m RL. This manhole is then connected to a DN 300 pipe connecting to the last manhole on the Box Drain pipe. This pipe will also include backflow prevention.

The wetland has been modelled in MIKE+ using a single basin node. This node was given a custom shape based on the aforementioned lengths, widths, and slopes with a 60 m width used as the total wetland width. It is also given a ground level of 9.0 m RL based on the existing ground level at site.

The wetlands then each connect to pipes via weirs. The weir has been given a custom crest shape to provide an increasing flow based on the Cipolletti weir, and then a pipe with a diameter of 1,050 mm to flow through when the water level exceeds 7.995 m RL giving the equivalent overflow through the top of the manhole. These then connect to DN300 concrete pipes connecting to the manhole proceeding the Box Drain pipe outlet. These pipes have all been set to include non-return valves. The design of this infrastructure in MIKE+ can all be seen below in Figure 11.

4.5. Infrastructure in MIKE+

The Infrastructure in MIKE+ can be seen below in Figure 11.

Figure 11: New Box Drain infrastructure in MIKE+.

5. Storm Event Modelling Methodology and Results

5.1. Storm Event Modelling Methodology

To understand the impact of this proposed infrastructure on Box Drain multiple models will be run. These models will assess the infrastructure with varying rainfall event intensities, rainfall event durations, adverse and non-adverse conditions, and future and present climates. In total this will require 20 models to be run and a summary of these can be seen below in Table 3.

Table 3: Model runs required to assess the proposed Box Drain infrastructure.

Batch	Scenarios			Rainfall durations required			
	Climate	Development	Groundwater/ tailwater conditions	25mm Event	20% AEP	2% AEP	0.5% AEP
3	Present Climate	Existing development, proposed infrastructure	Adverse conditions	2hr	2hr	2hr and 3hr	2hr
4	Future Climate	Existing development, proposed infrastructure	Adverse conditions	2hr	2hr	2hr and 3hr	2hr
5	Present Climate	Existing development, proposed infrastructure	Low / DHI model conditions	2hr	2hr	2hr and 3hr	2hr
6	Future Climate	Existing development, proposed infrastructure	Low / DHI model conditions	2hr	2hr	2hr and 3hr	2hr

All of these models will be run in MIKE+ using the collection systems module.

5.1.1. 1D vs 2D Modelling

MIKE+ allows for models to be run in either 1D or 2D. This impacts models through the addition of 2D surface flows and the 2D domain surface for the area can be seen below in Figure 12. This shows that overland flows in the 2D domain would flow from the north to the south towards Box Drain. Due to the basins having rims this flow would be diverted around the new infrastructure towards the far end of Box Drain. Using the existing 2D domain would result in an inflow into Box Drain which would bypass the infrastructure which would not occur. Since this proposed infrastructure cannot be easily included in the 2D domain and any 2D flows should not interact with the proposed infrastructure it was determined that a 1D model was adequate for this modelling exercise.

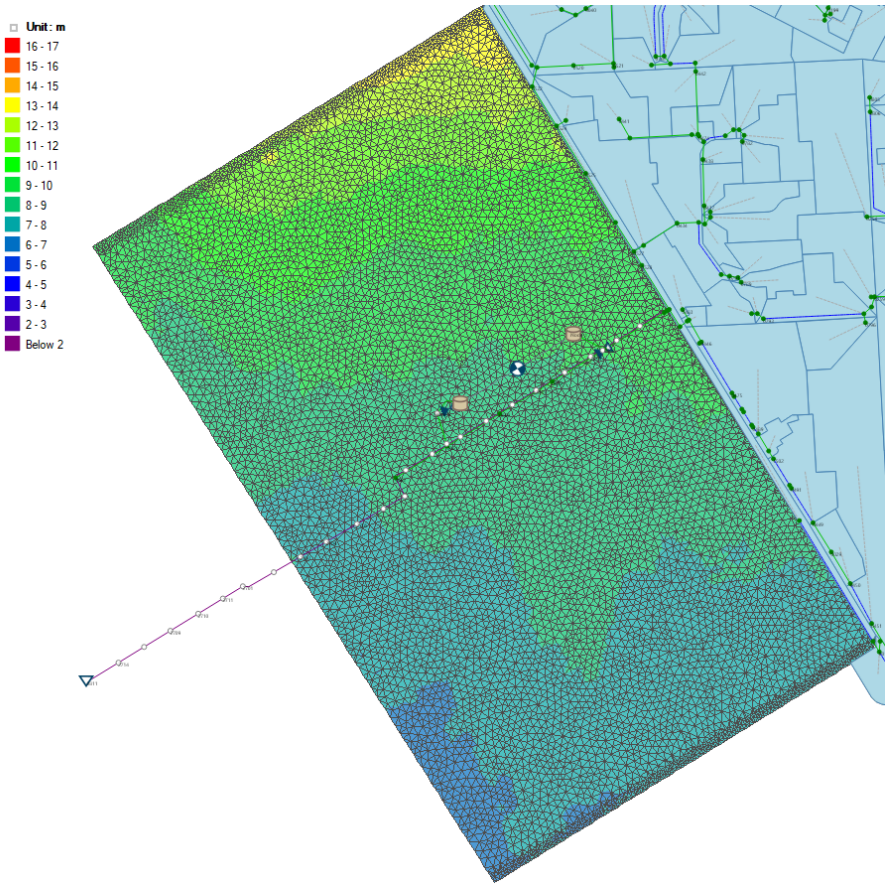

Figure 12: 2D domain around Box Drain.

5.1.2. Adverse Conditions

From the prior modelling of the adverse tailwater scenario the same conditions should be used. This used an inflow to node of 0.765 m^3/s at the first node following the Box Drain pipe outlet. This will be used for all runs with the adverse tailwater condition.

5.1.3. Verification of Infrastructure

Before commencing the modelling for the scenarios in Table 3, the infrastructure was assessed in the model by running an event and examining the flows through different components. To assess this a 200y02h event was used to run peak flows through the system.

The discharge at the first overflow weir and the pipe to the wetland can be seen below Figure 13. This shows that during the event water is primarily directed through the pipe into the wetland as intended, and then when the flow overwhelms the capacity of this pipe it is then discharged into box drain over the top of the new weir.

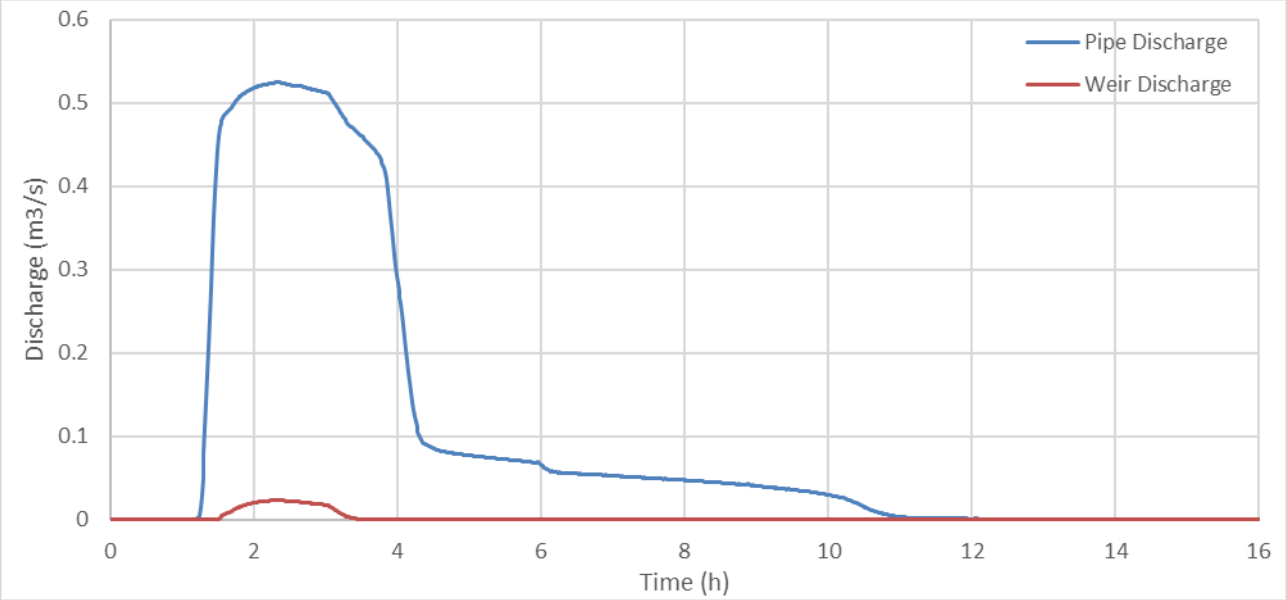

Figure 13: Discharge check at first weir with pipe flow to wetland in blue and weir overflow in red.

To check the first flush basin and its outfall structures were operating as intended the flow through the orifice as well as the level in the first flush basin was examined. The results of this can be seen below in Figure 14.

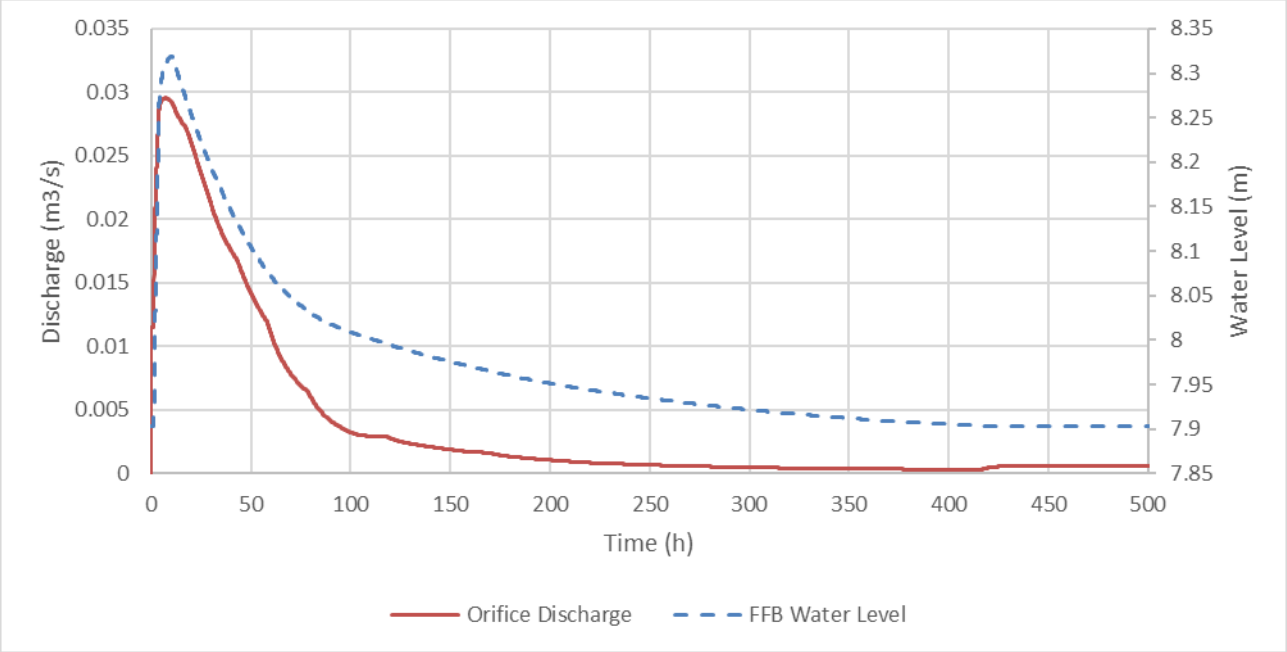

Figure 14: First flush basin function with the orifice discharge shown in red and the basin water level in blue.

This shows that the orifice outfall structure is operating as intended with discharge starting when the water level in the FFB (first flush basin) reaches 7.95 m RL. This also indicates some instability occurs once the water level in the FFB stabilizes with the orifice starting to discharge water despite the water level in the FFB being below 7.95 m. Due to the timing of this instability after 400 hours this will not impact the results.

The weir from the wetland connecting back into the Box Drain pipe was examined to check if it is functioning as intended. To check this the flow through the weir was examined as well as the water levels in the wetland. The results of this are shown below in Figure 15.

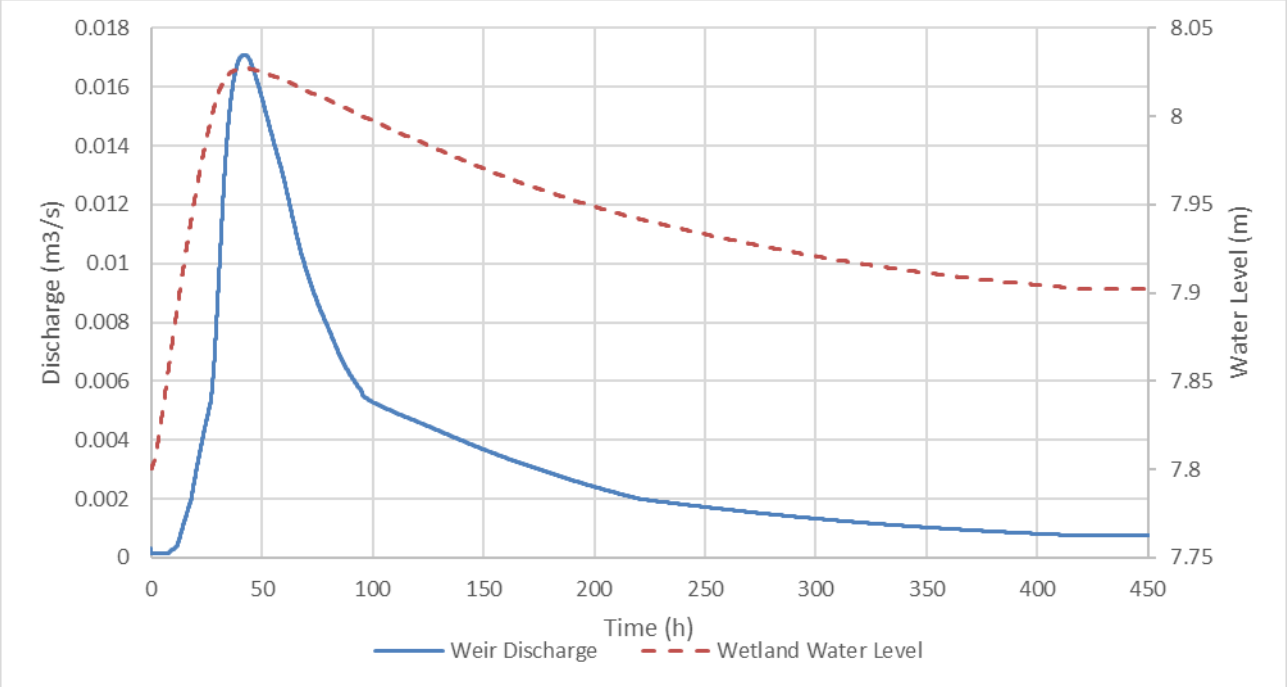

Figure 15: Wetland function with elevations in the wetland shown in red and discharge out of the weir shown in blue.

This shows that the wetland and weirs are operating with similar elevations and flows. This also shows that the weir begins to operate as soon as the water levels in the wetlands exceed 7.845 m RL as intended.

The final check is to ensure that the Box Drain pipe and swale are still functioning with the new infrastructure. The results of this are shown below in Figure 16 displaying discharge in each component after the flow is diverted to the FFB.

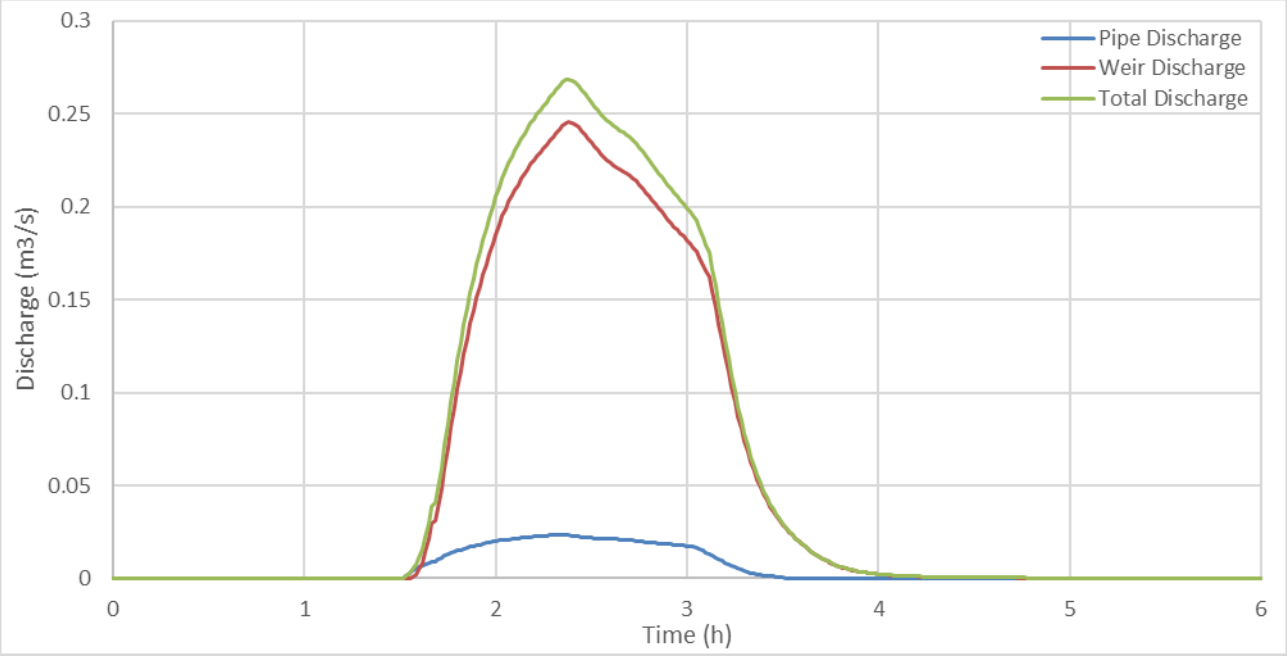

Figure 16: Box Drain discharge in pipe (blue), swale (red), and total (green).

This shows a substantial reduction in the discharge through box drain with the addition of the infrastructure with some flows still entering the Box Drain swale at the start of the drain and majority of the piped flow being diverted through to the infrastructure.

5.2. Storm Event Modelling Results

5.2.1. Infrastructure Comparison

To understand the impact of the proposed wetland and infrastructure on the flows through Box Drain results from the models were examined. The first comparison was examining the difference in peak water levels for Box Drain pre- and post-infrastructure. This was conducted for the 25mm, 005y, 050y, and 200y future events and these are show below in Figures 17, 18, 19, and 20, respectively.

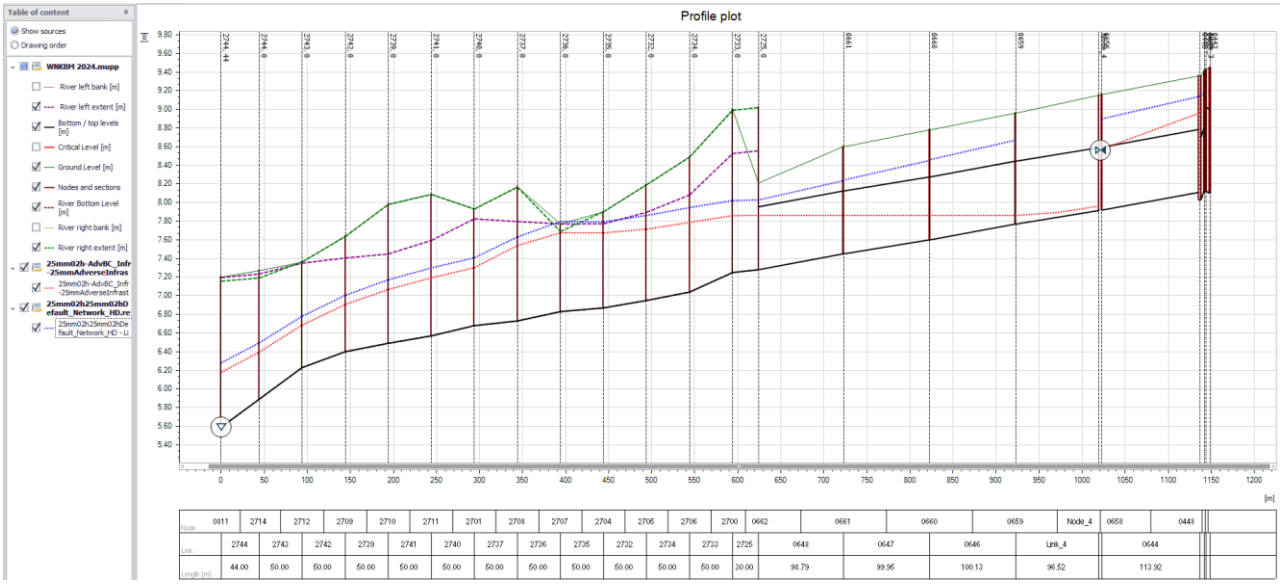

Figure 17: Comparison between 25mm02h rainfall events with (red) and without (blue) the proposed infrastructure.

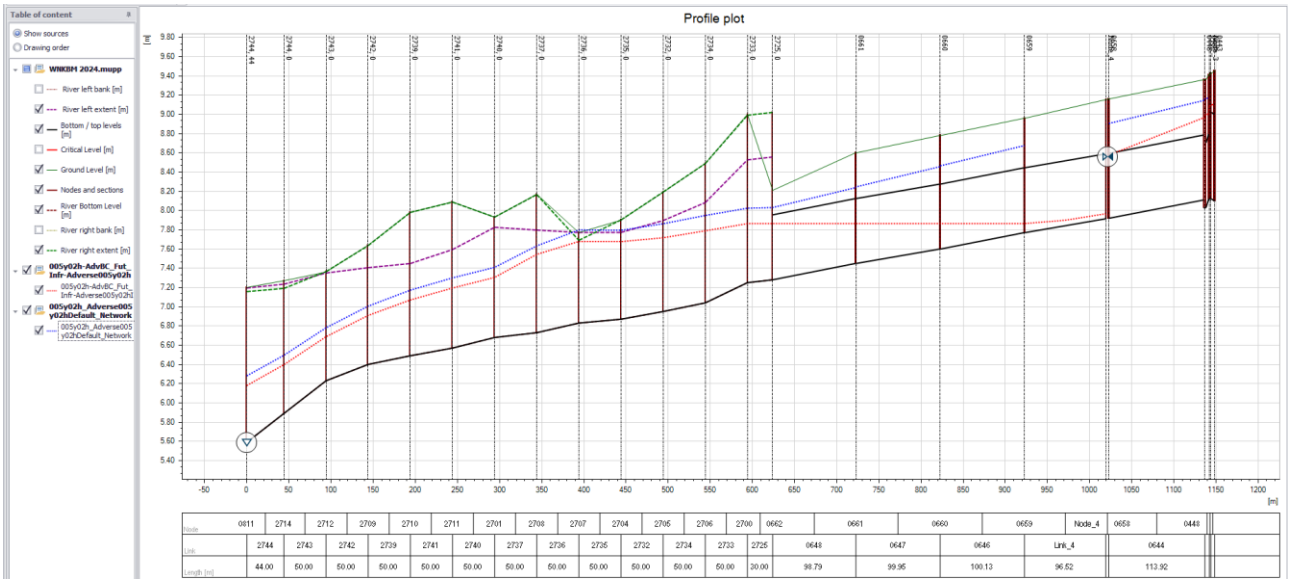

Figure 18: Comparison between 005y02h rainfall events with (red) and without (blue) the proposed infrastructure.

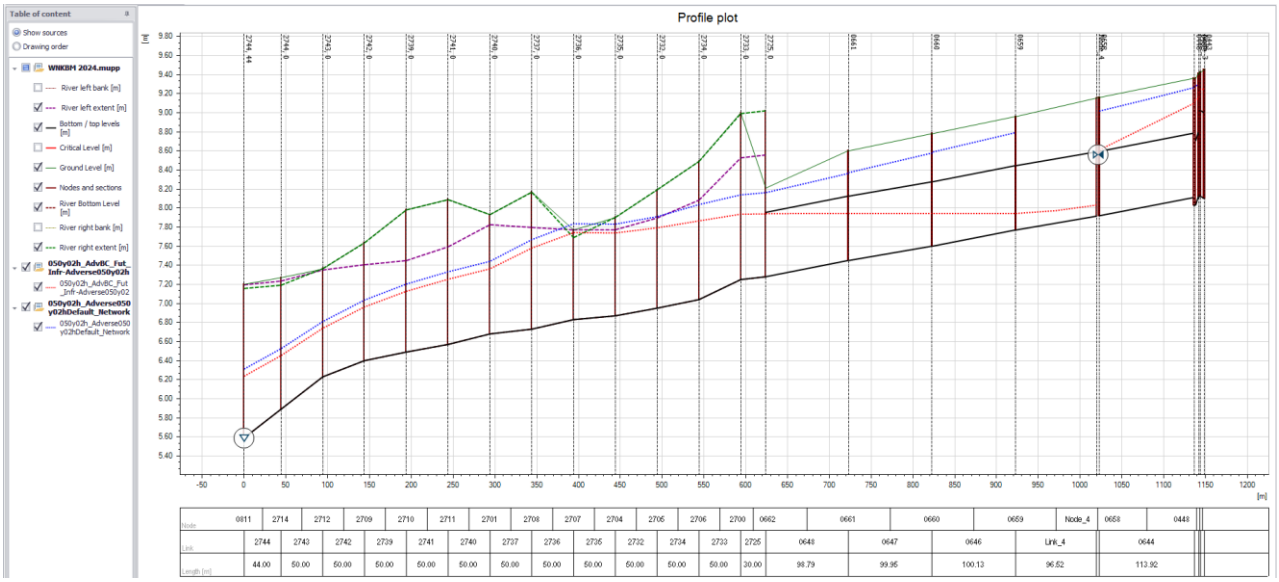

Figure 19: Comparison between 050y02h rainfall events with (red) and without (blue) the proposed infrastructure.

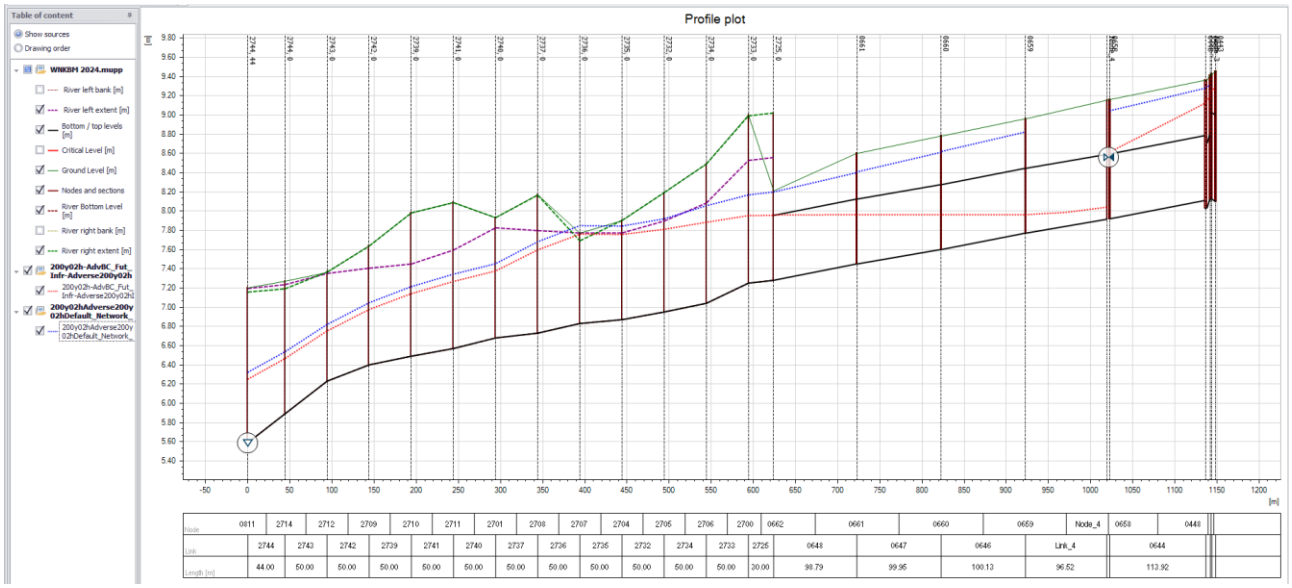

Figure 20: Comparison between the 200y02h rainfall events with (red) and without (blue) the proposed infrastructure.

These results show that throughout the whole drain the peak water levels are reduced by the creation of the new infrastructure during all the events. A larger impact can be seen in the piped section of Box Drain, above the adverse condition. Though the intensity of the weather events impacts the maximum level reached in Box Drain in both cases, the infrastructure provides a similar total reduction in water levels regardless of the intensity of the weather event.

To get a broader understanding of the impacts of the new infrastructure the discharge out of Box Drain was also examined. This was obtained using the combined flows from the Box Drain pipe and channel and comparing this for each of the weather events' models with and without infrastructure. The results for the 25mm02h, 005y02h, 050y02h, and 200y02h rainfall events can be seen below in Figures 21, 22, 23, and 24, respectively.

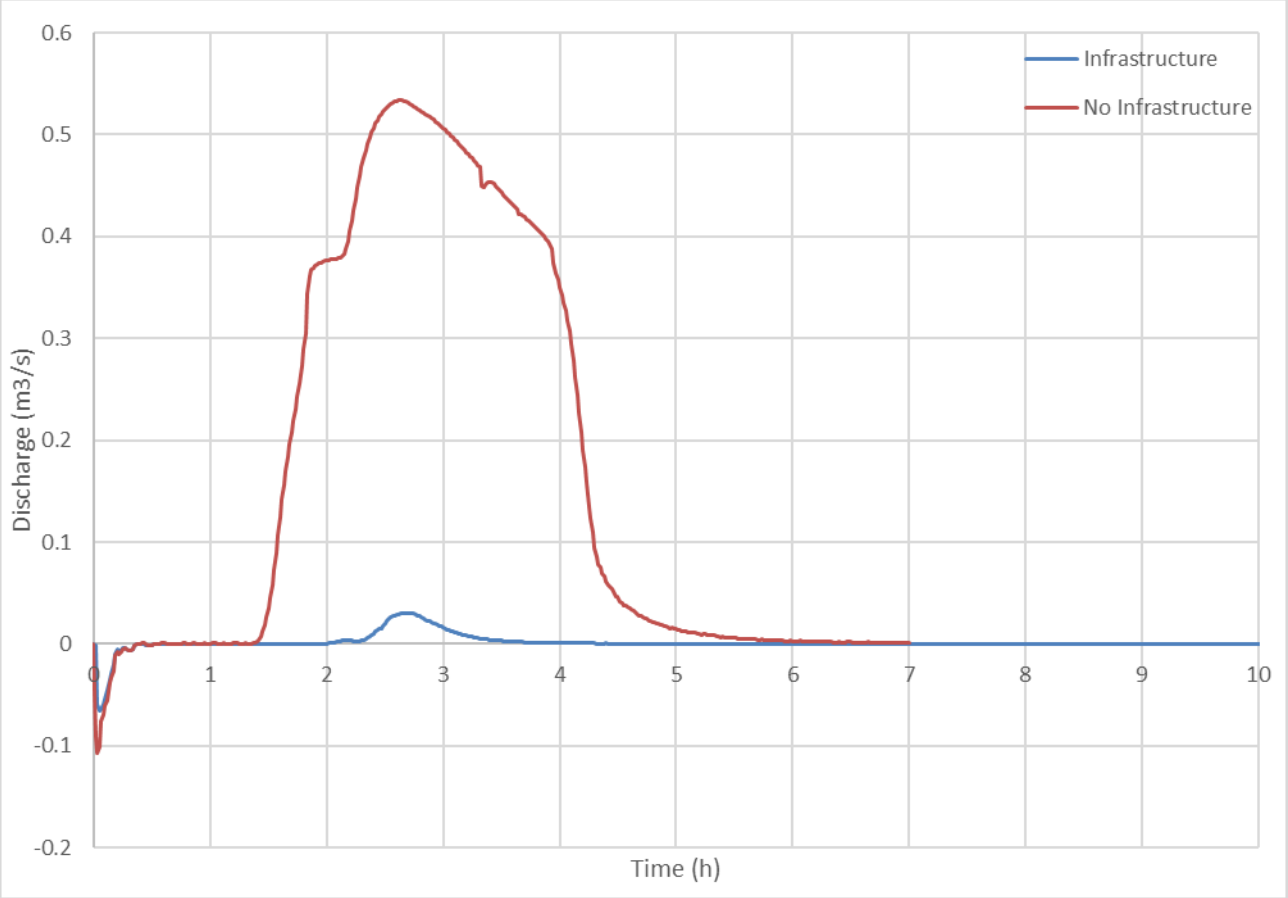

Figure 21: Cumulative Box Drain discharge with and without infrastructure for a 25mm 2h storm event.

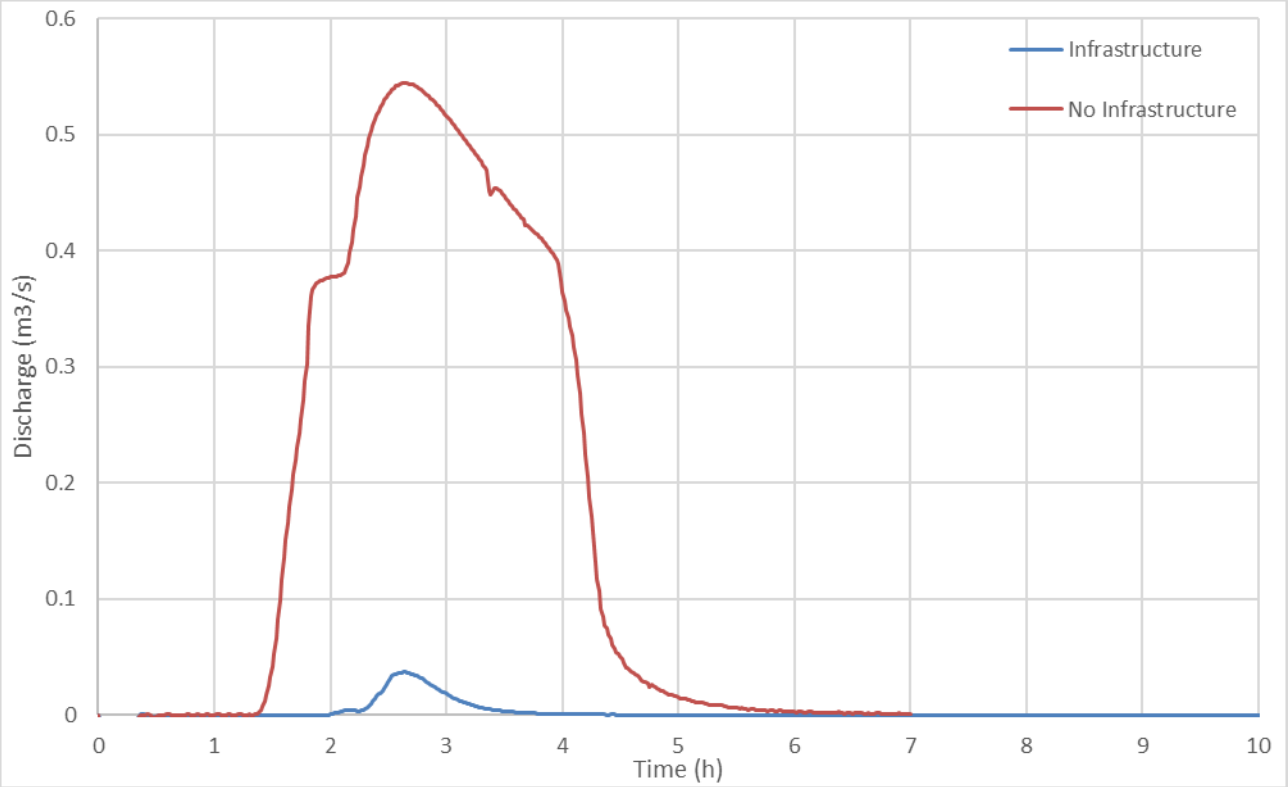

Figure 22: Cumulative Box Drain discharge with and without infrastructure for a 5-year 2h storm event.

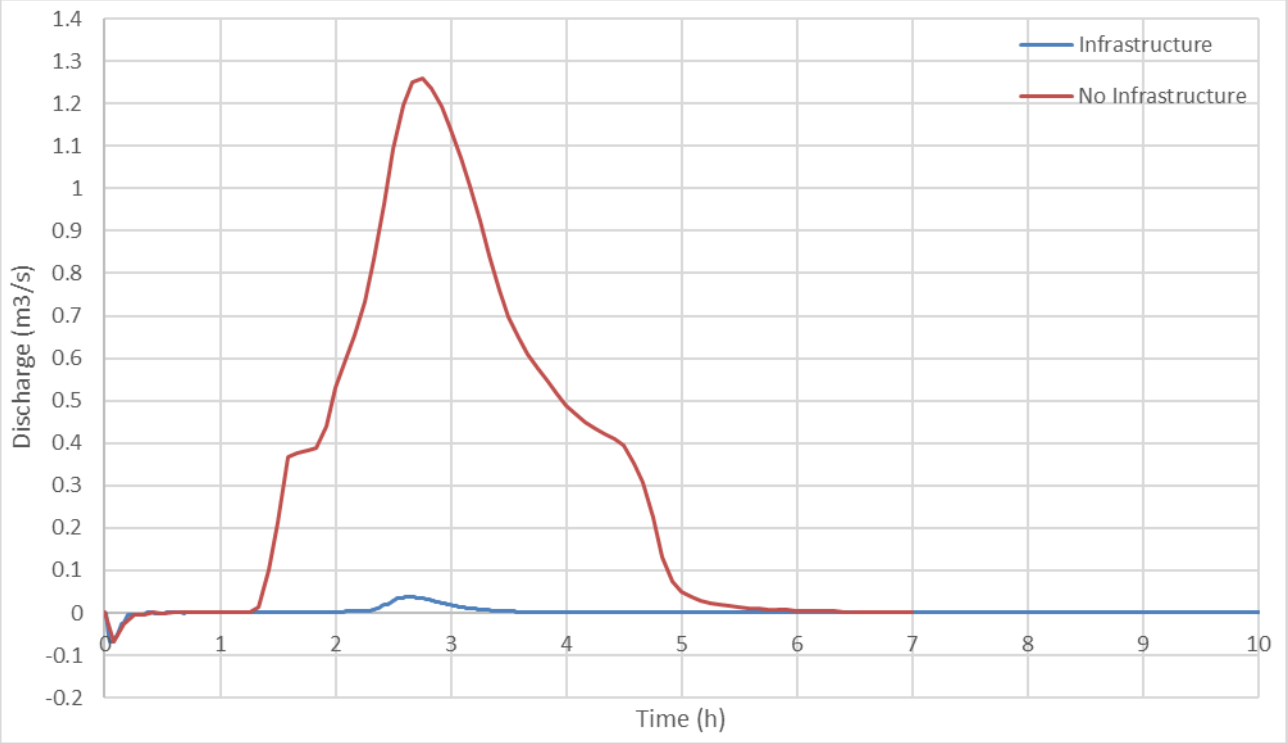

Figure 23: Cumulative Box Drain discharge with and without infrastructure for a 50-year 2h storm event.

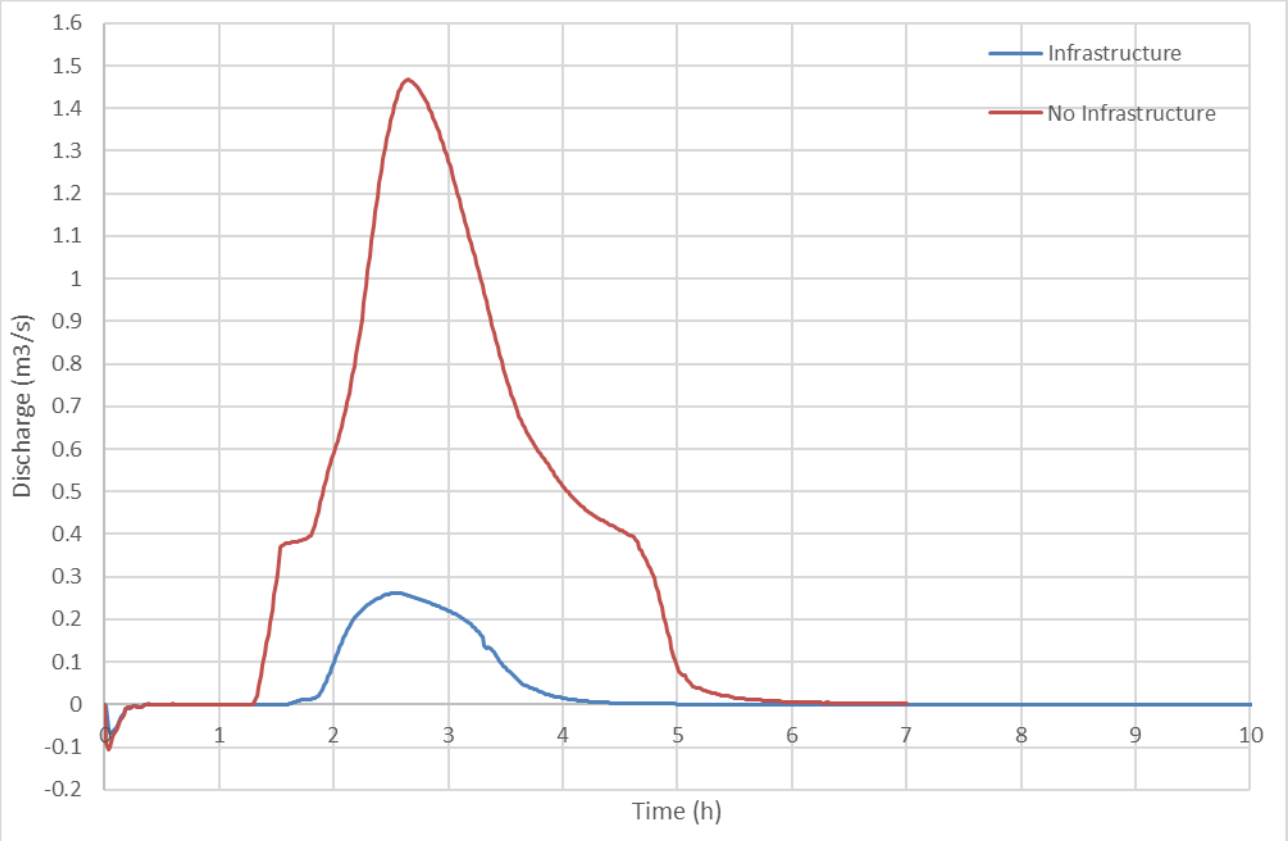

Figure 24: Cumulative Box Drain discharge with and without infrastructure for a 200-year 2h storm event.

This shows a significant decrease in peak flows during all storm events with the new infrastructure. For the 1 in 200-year event this reduces the peak flow out of box drain from approximately 1.47 m^3/s to 0.26 m^3/s and for the 25mm rainfall event from 0.53 m^3/s to 0.03 m^3/s.

5.2.2. Adverse Condition Comparison

In addition to understanding the impact of the infrastructure itself it is important to understand what impact the adverse conditions would have on this infrastructure. Due to the use of backflow prevention out of the wetland direct impacts from the adverse conditions would not be expected. The key impacts to examine would be a reduction in the flow out of the wetland outlet system, and the impacts on Box Drain. The impacts on Box Drain have been examined for the 25mm02h, 005y02h, 050y02h and 200y02h events and this is shown below in Figures 25, 26, 27, and 28, respectively.

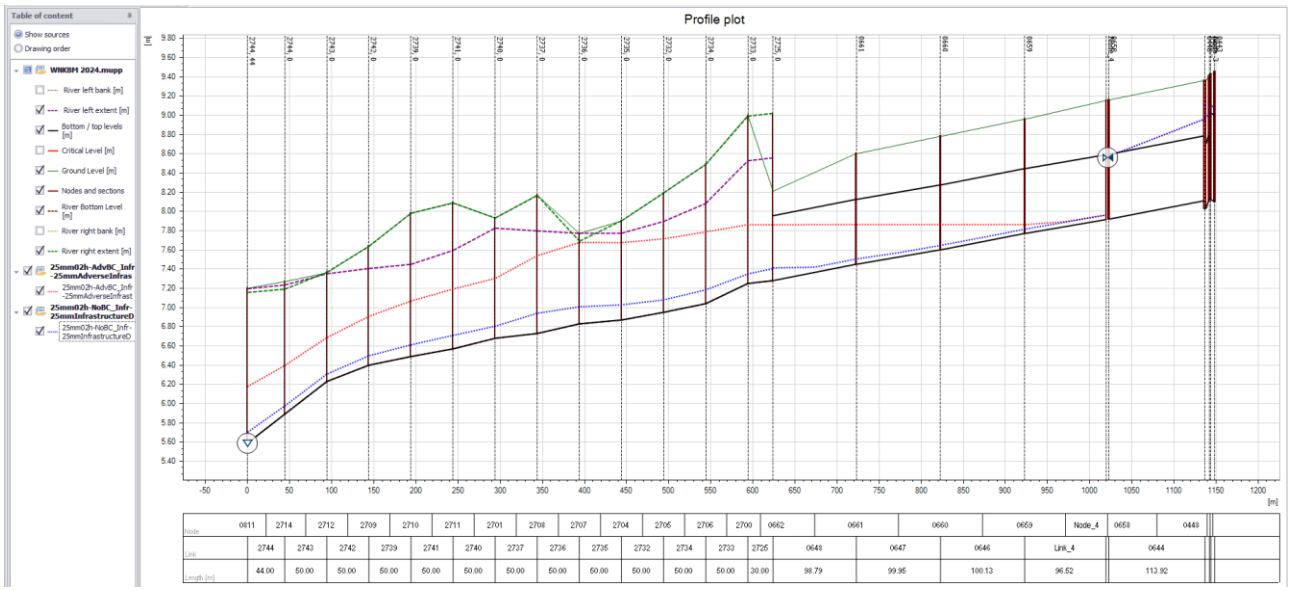

Figure 25: 25mm02h comparison of maximum box drain levels with infrastructure with the adverse condition in red and the no adverse condition in blue.

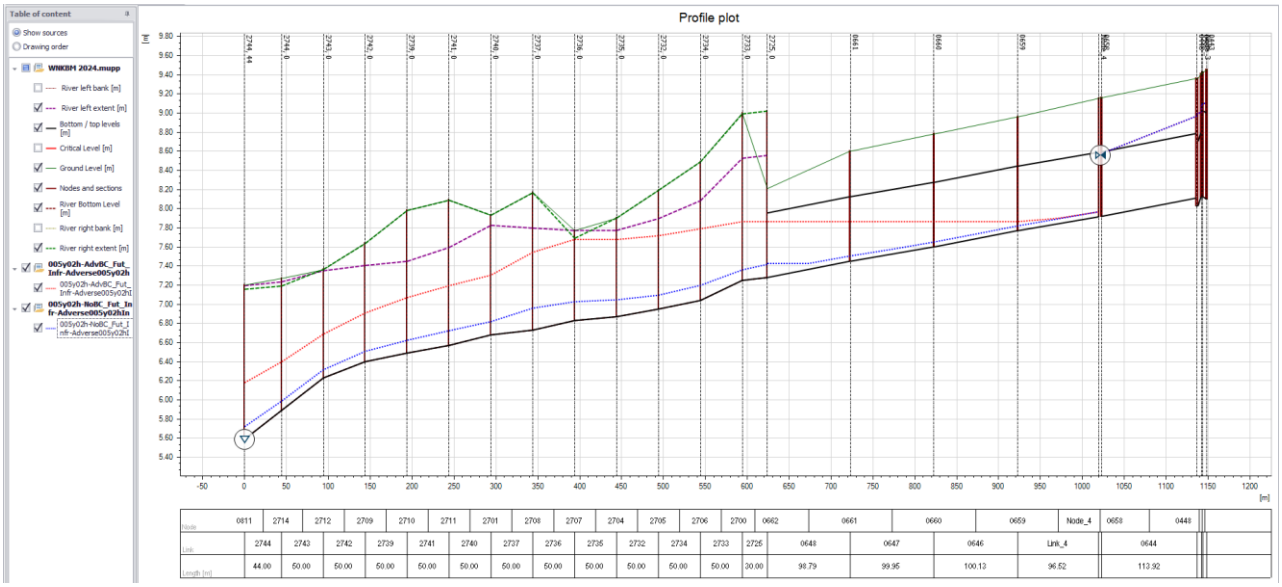

Figure 26: 005y02h comparison of maximum box drain levels with infrastructure with the adverse condition in red and the no adverse condition in blue.

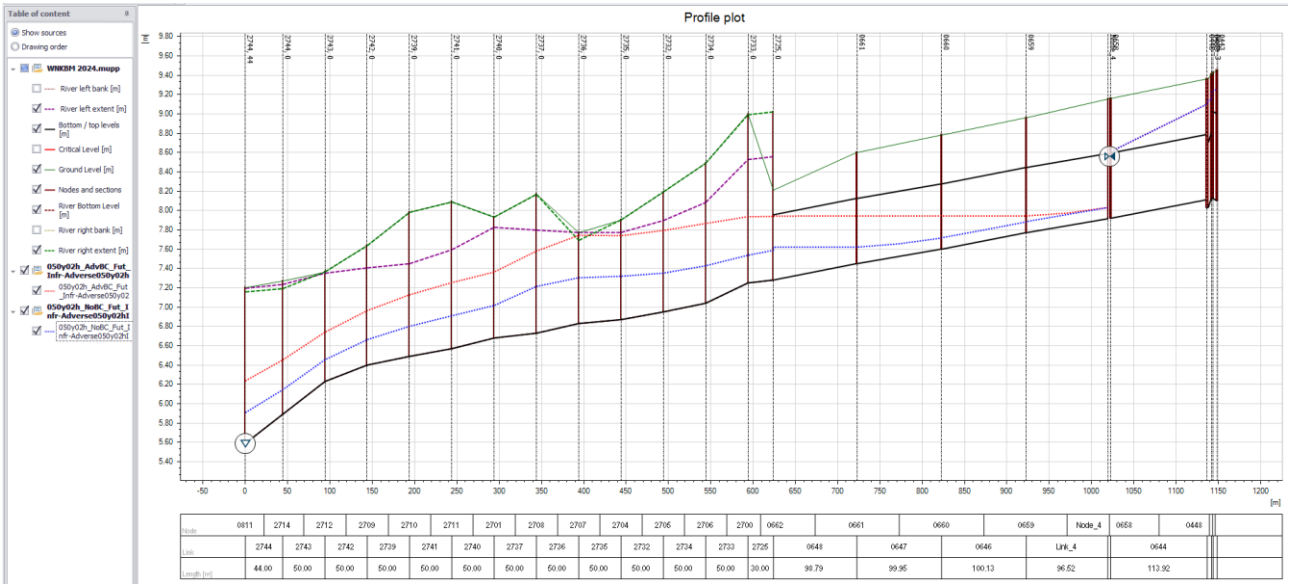

Figure 27: 050y02h comparison of maximum box drain levels with infrastructure with the adverse condition in red and the no adverse condition in blue.

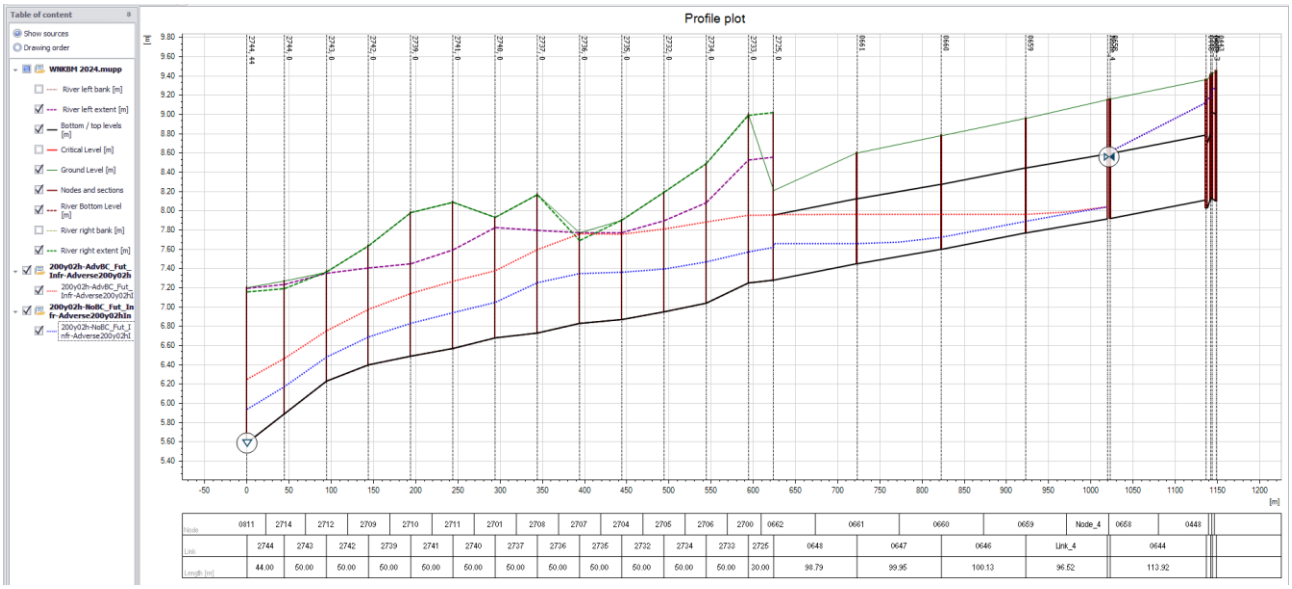

Figure 28: 200y02h comparison of maximum box drain levels with infrastructure with the adverse condition in read and the no adverse condition in blue.

These show that for all events the adverse condition increases the maximum water levels in Box Drain following the outlet and these have an impact prior to the outlet until around the third manhole up the Box Drain pipe.

To examine the impacts of the adverse condition on the infrastructure the flows out of the FFB weirs have been examined with and without the adverse condition for the 25mm02h, 005y02h, 050y02h, and 200y02h scenarios and these are shown below in Figures 29, 30, 31, and 32, respectively.

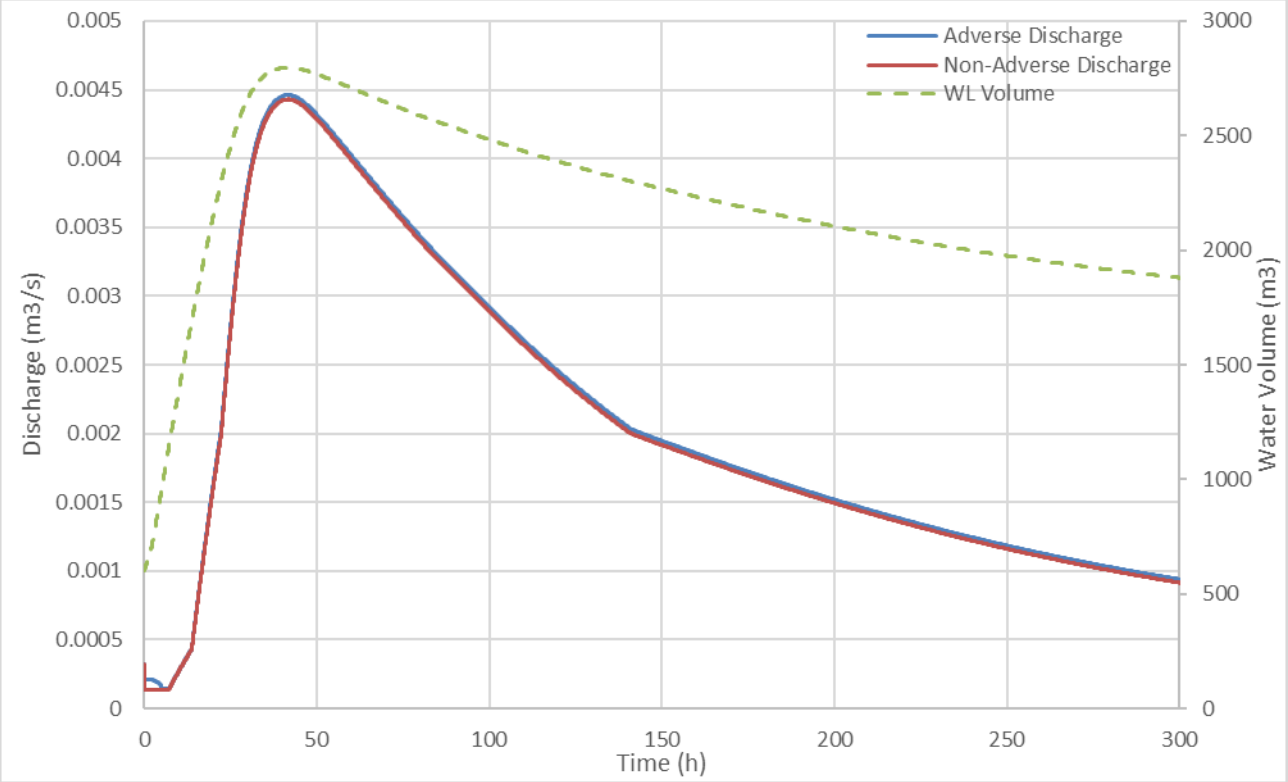

Figure 29: 25mm02h cumulative wetland weir discharge with adverse condition in blue, no adverse condition in red and the WL volume in green.

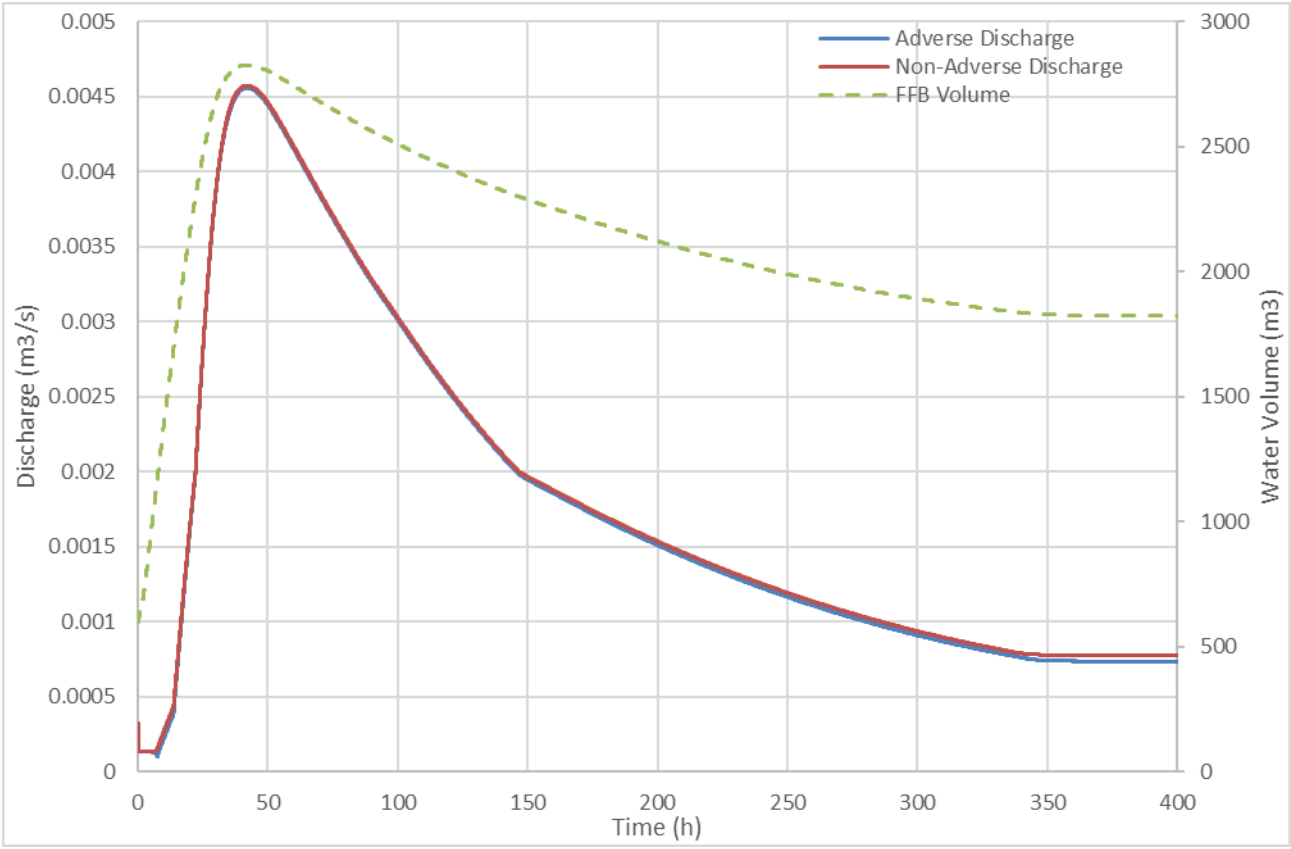

Figure 30: 005y02h cumulative wetland weir discharge with adverse condition in blue, no adverse condition in red and the WL volume in green.

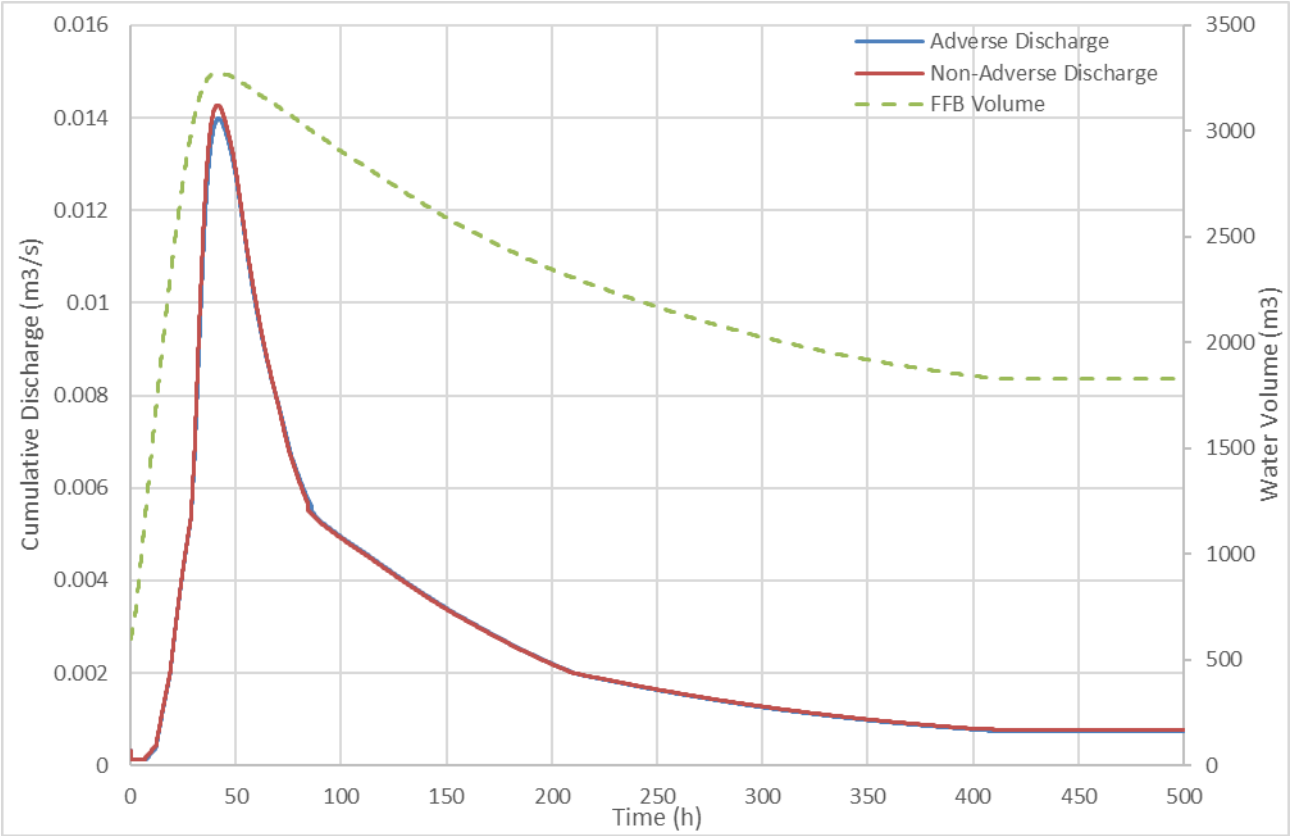

Figure 31: 050y02h cumulative wetland weir discharge with adverse condition in blue, no adverse condition in red and the WL volume in green.

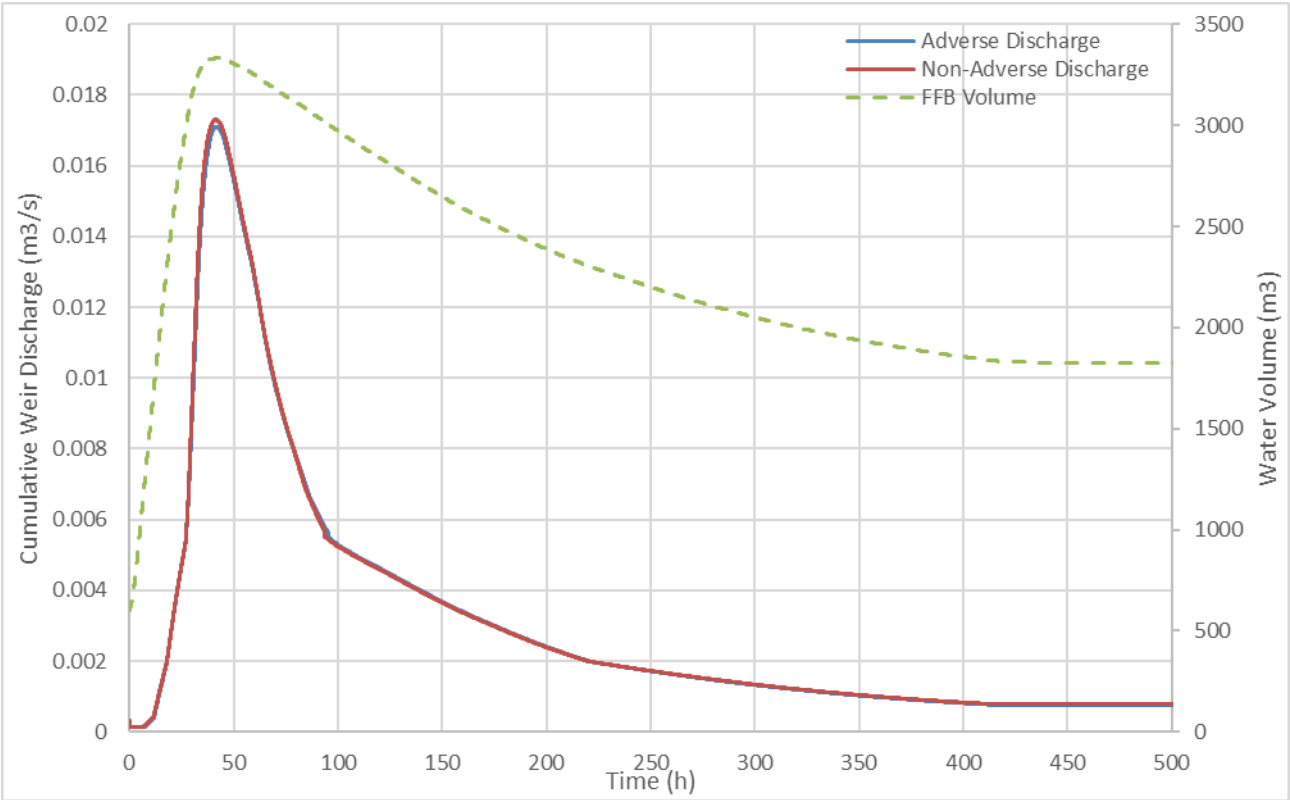

Figure 32: 200y02h cumulative wetland weir discharge with adverse condition in blue, no adverse condition in red and the WL volume in green.

This shows that the adverse condition causes minimal impacts on the function of the new infrastructure, with its peak impact only being noticeable during the 050y02h and 200y02h storm events.

5.2.3. Wetland and First Flush Basin Flows

To provide a comprehensive understanding of the new first flush basin and wetland figures have been created showing the inflow, water level, and outflow for the first flush basin and the wetland. This has been done for the future state of each of the storm events listed in Table 3 using no adverse condition, as this had little to no impact on the infrastructure. The results of this can be seen below from Figures 33 to 47.

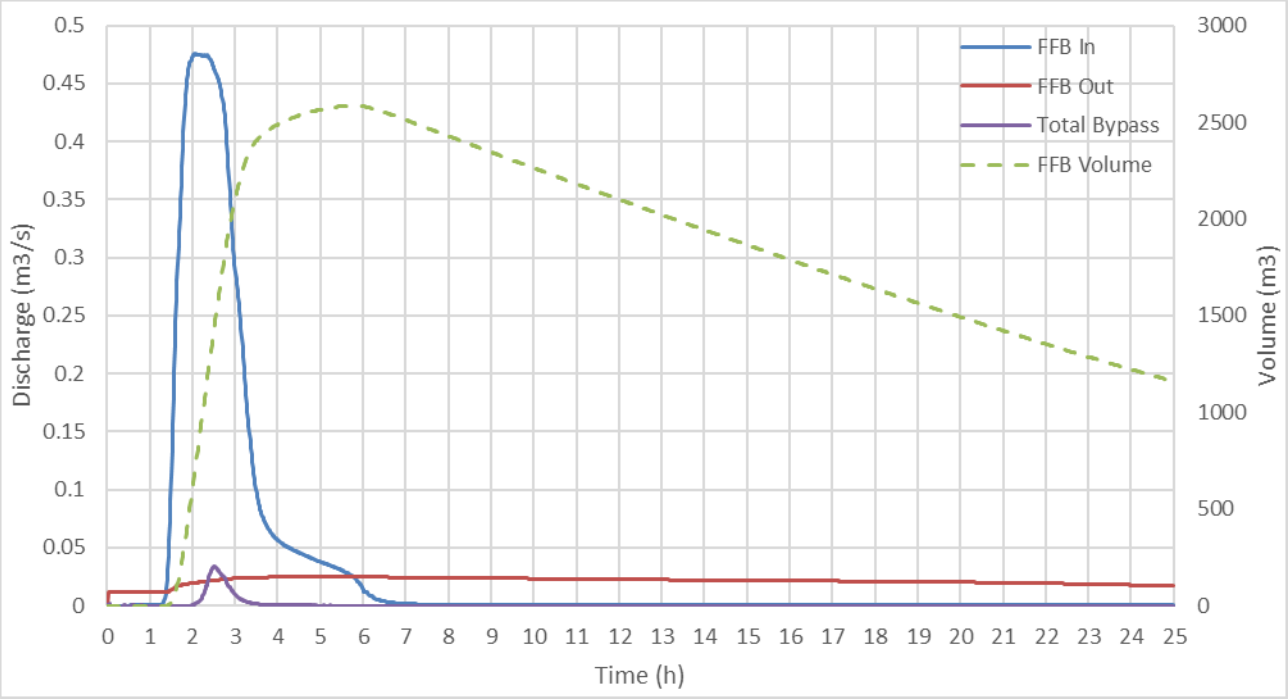

Figure 33: First flush basin flows and water level for a 25mm02h storm event.

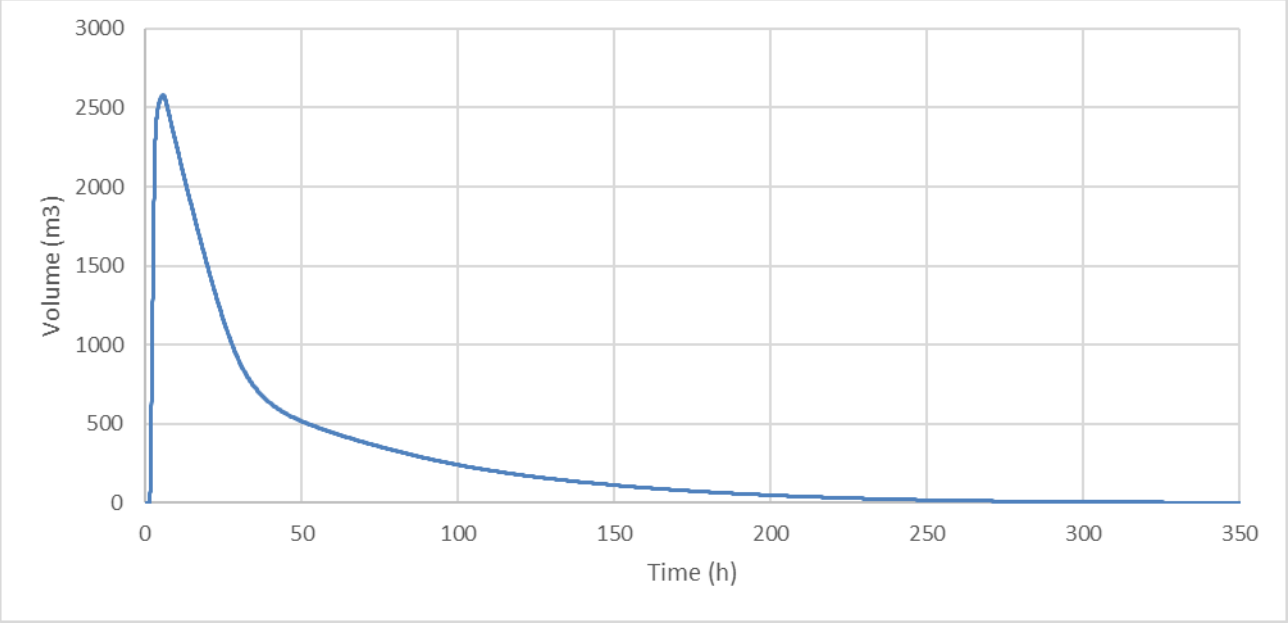

Figure 34: First flush basin full drain period for a 25mm02h storm event.

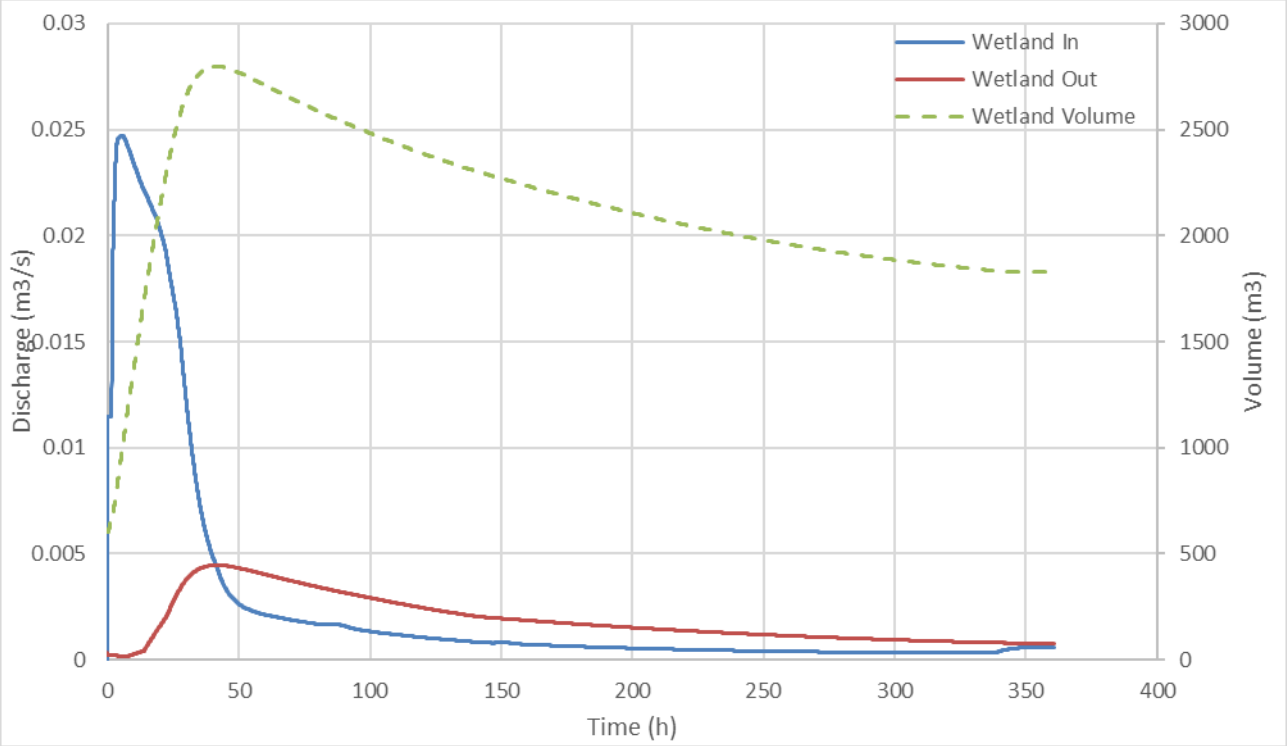

Figure 35: Wetland flows and water level for a 25mm02h storm event.

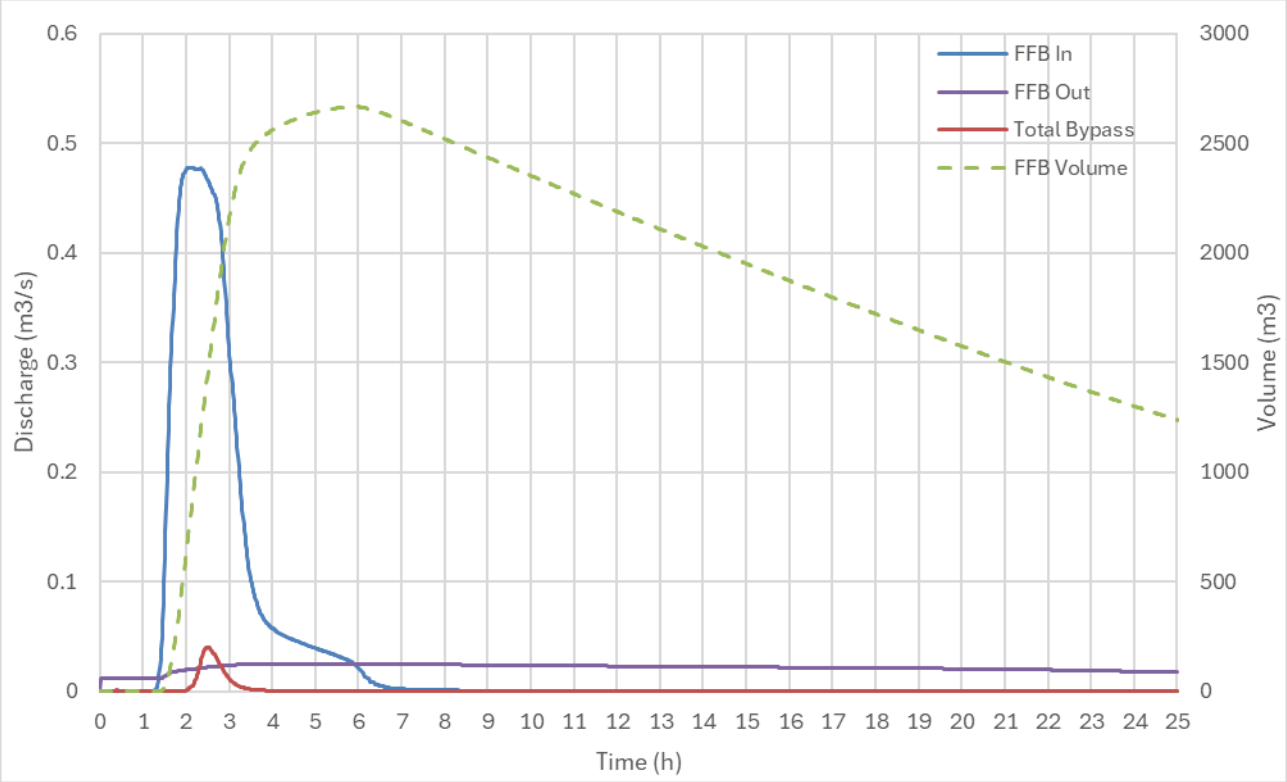

Figure 36: First flush basin flows and water level for a 005y02h storm event.

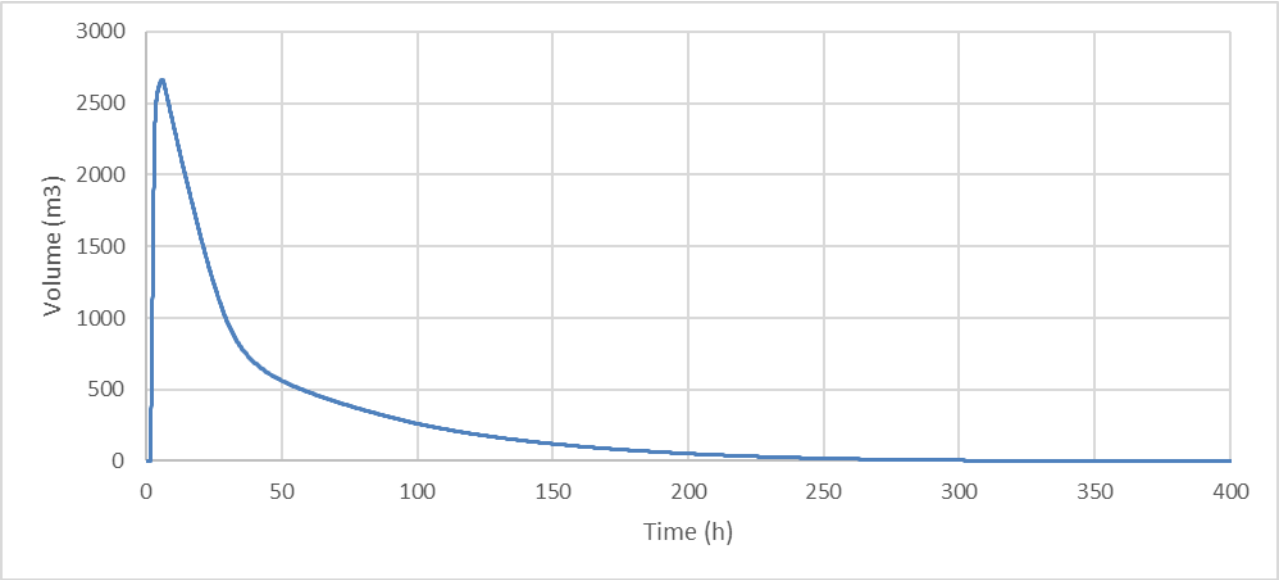

Figure 37: First flush basin full drain period for a 005y02h storm event.

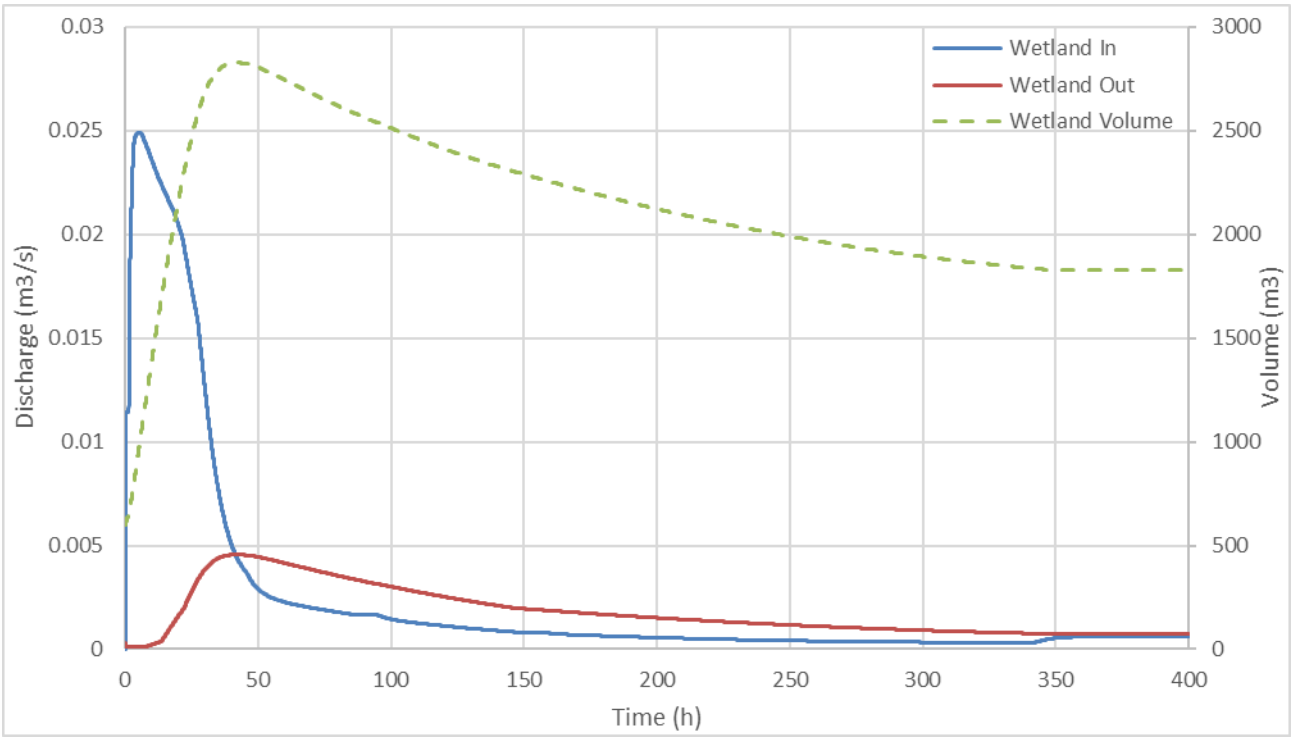

Figure 38: Wetland flows and water level for a 005y02h storm event.

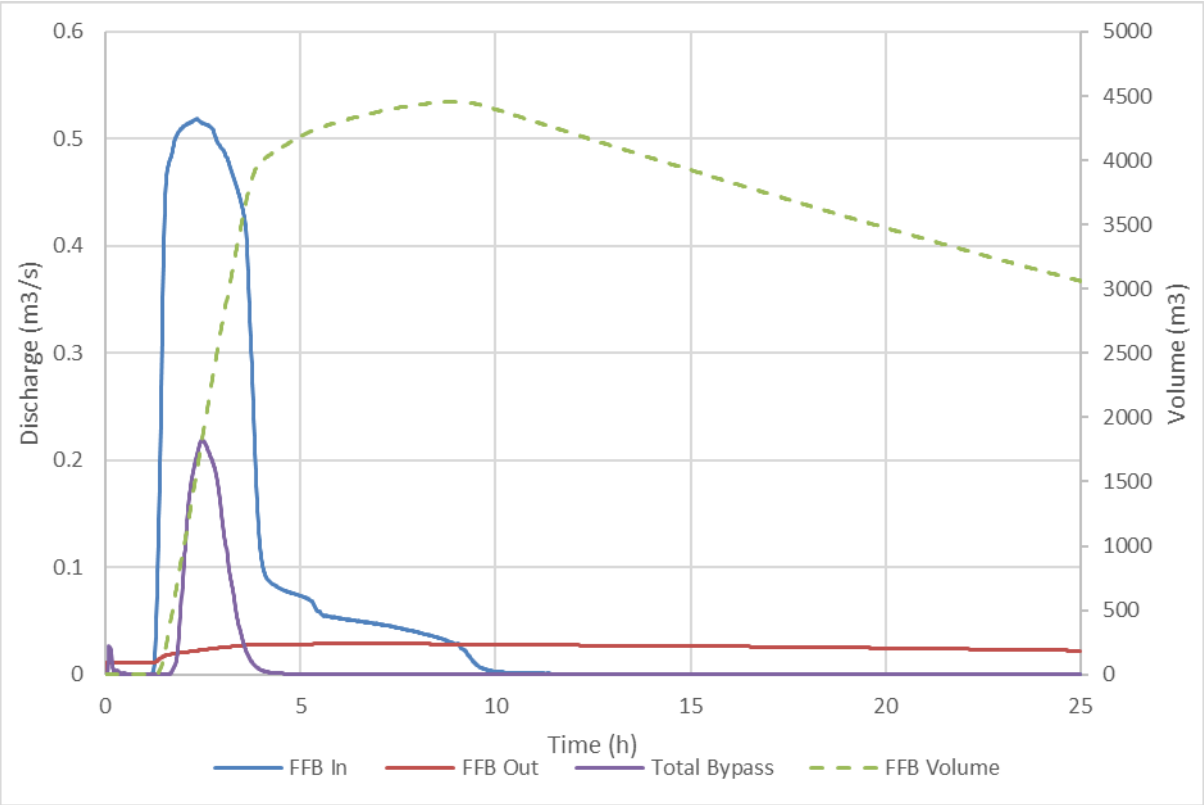

Figure 39: First flush basin flows and water level for a 050y02h Storm Event.

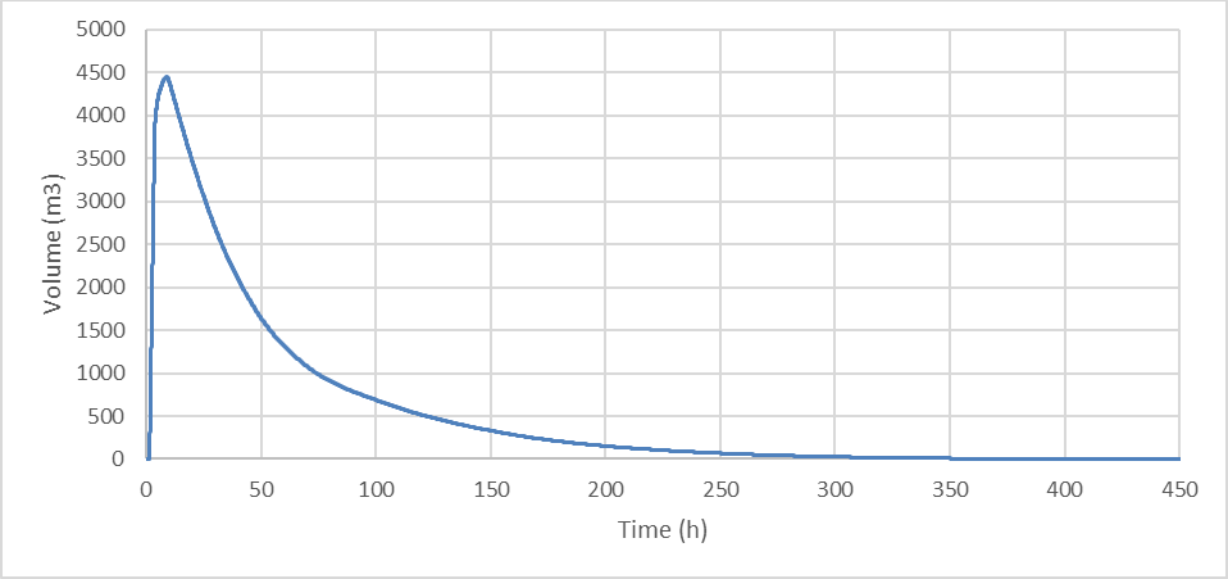

Figure 40: First flush basin full drain period for a 050y02h storm event.

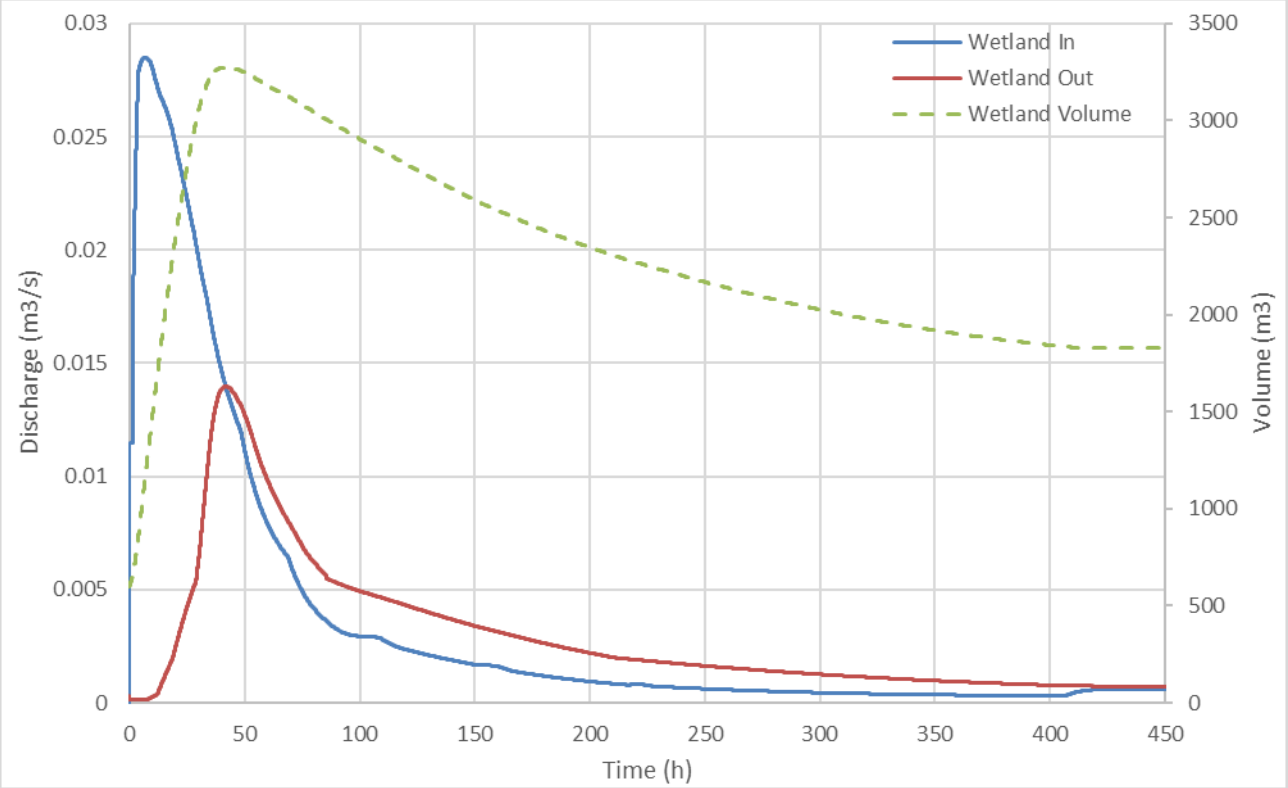

Figure 41: Wetland flows and water level for a 050y02h storm event.

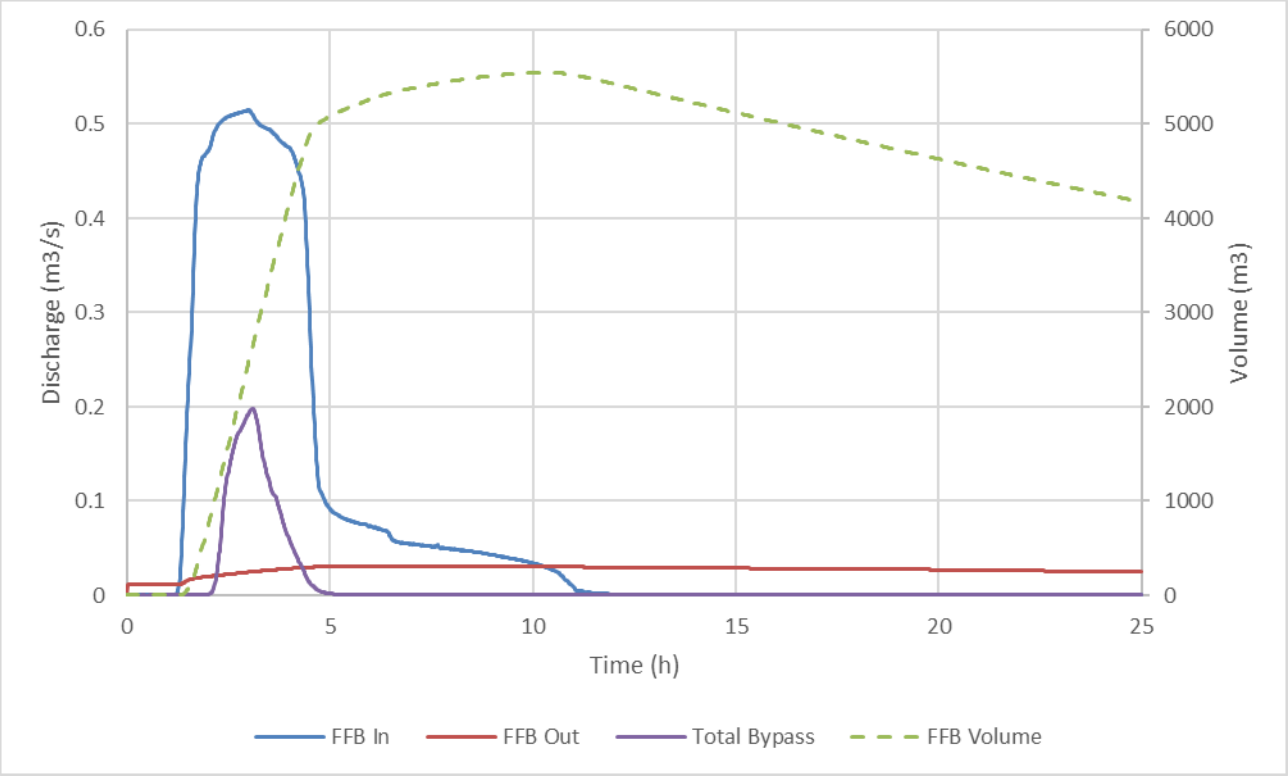

Figure 42: First flush basin flows and water level for a 050y03h storm event.

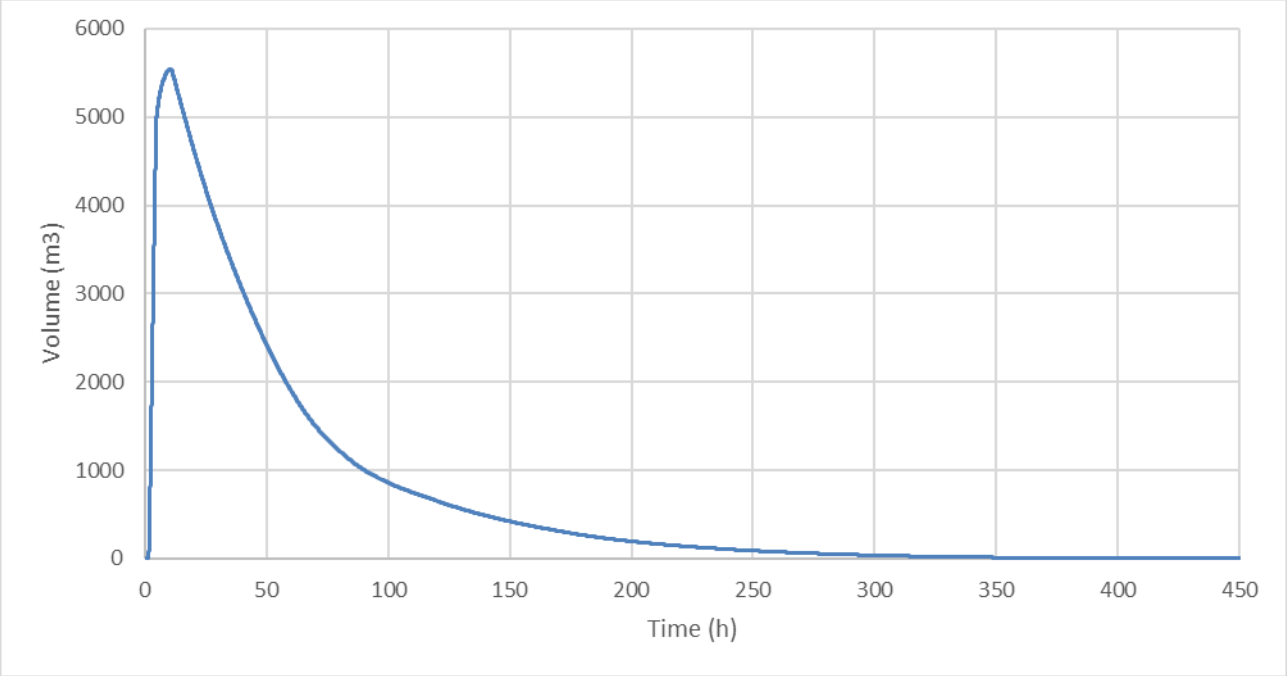

Figure 43: First flush basin full drain period for a 050y03h storm event.

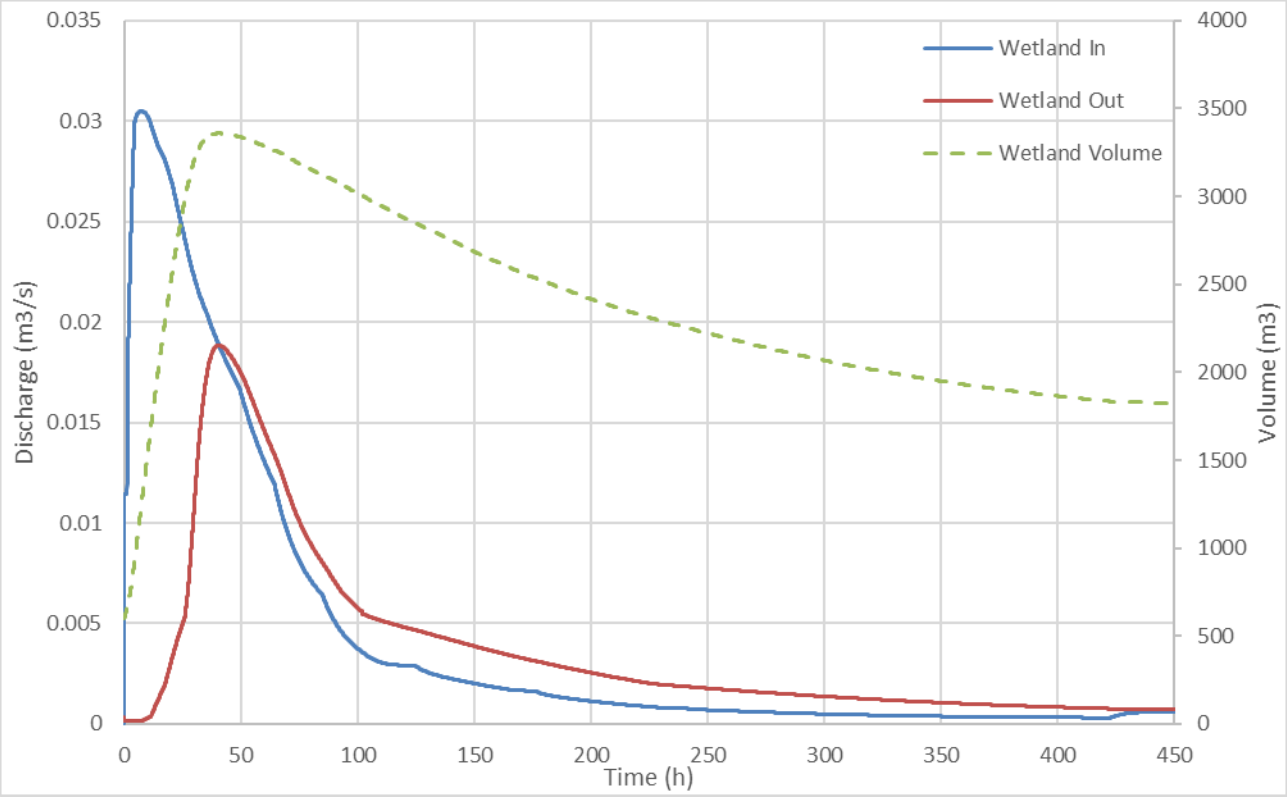

Figure 44: Wetland flows and water level for a 050y03h storm event.

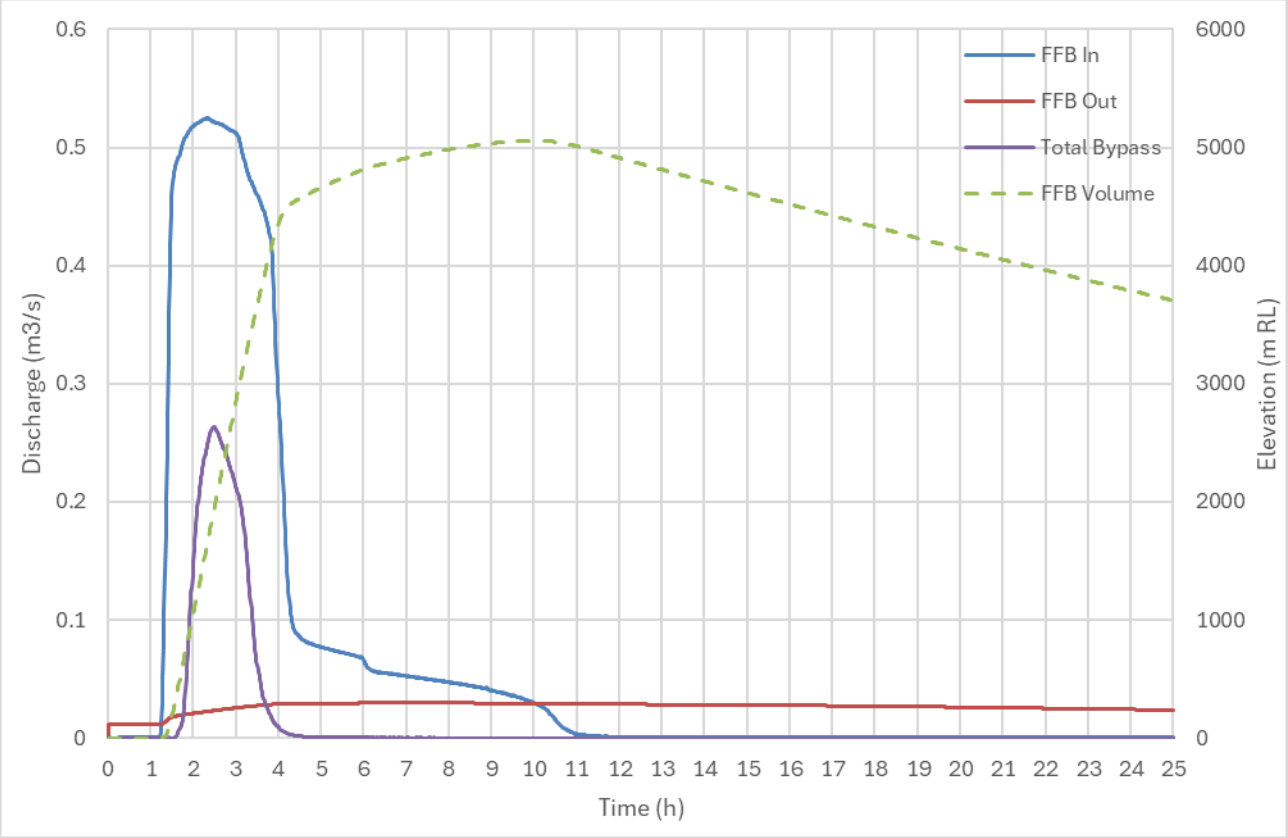

Figure 45: First flush basin flows and water level for a 200y02h storm event.

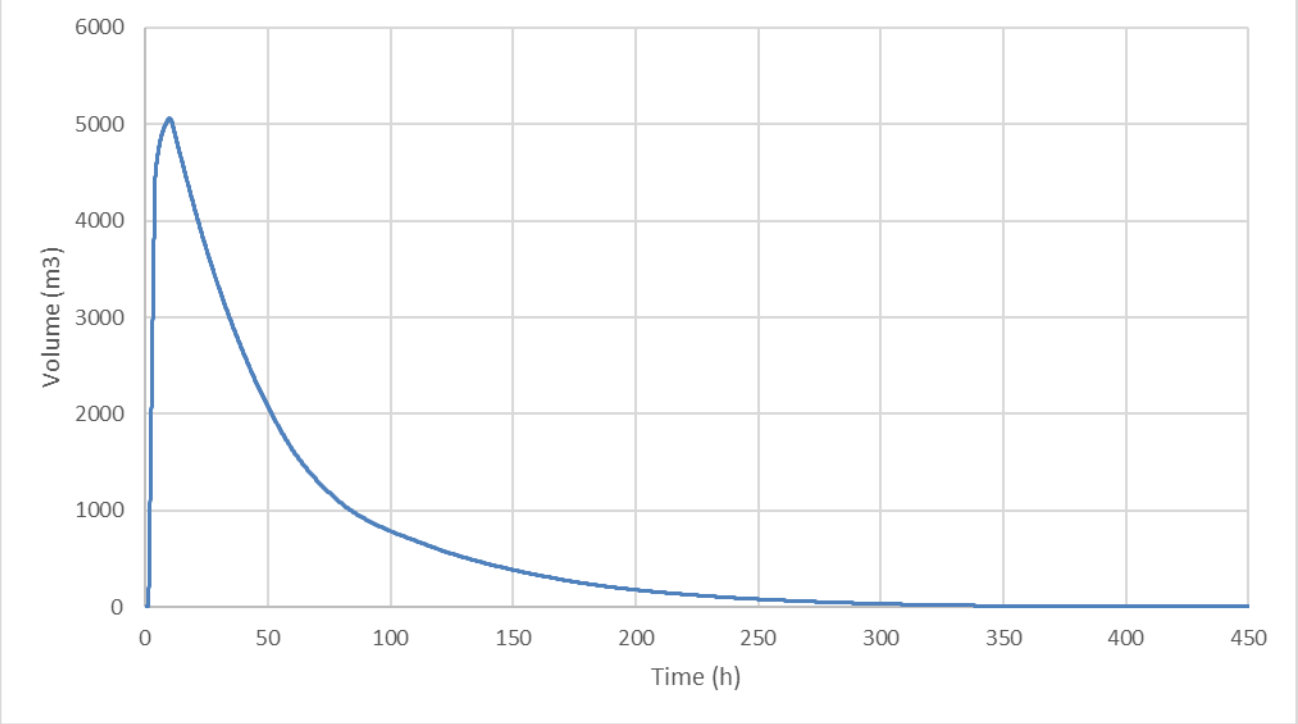

Figure 46: First flush basin full drain period for a 200y02h storm event.

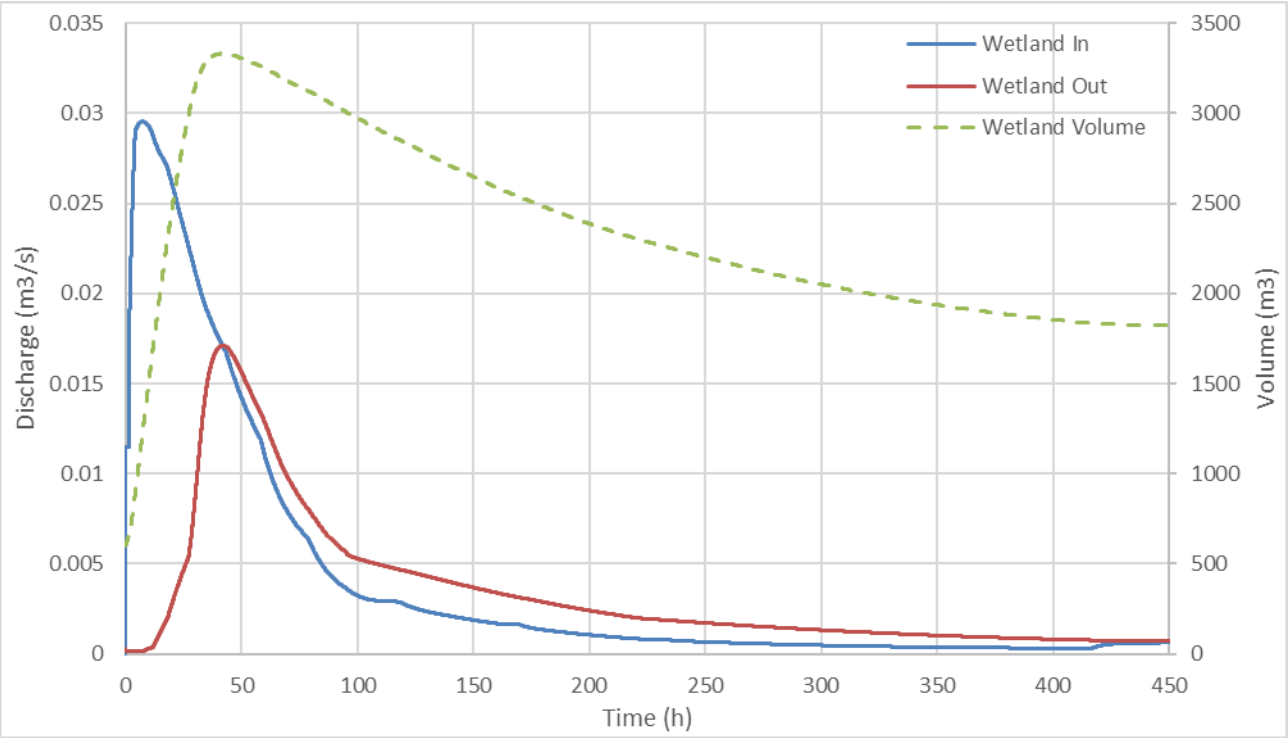

Figure 47: Wetland flows and water level for a 200y02h storm event.

5.2.4. Whole System Hydrographs

To acquire a full understanding of the systems key elements during all five of the events hydrographs have been created for each of the events. These hydrographs show water levels at the outlet, wetland, first flush basin, manhole connecting to the FFB, level at the start of Box Drain's swale, and the water level at Gibb's Drive. These graphs can be seen below as Figures 48-52.

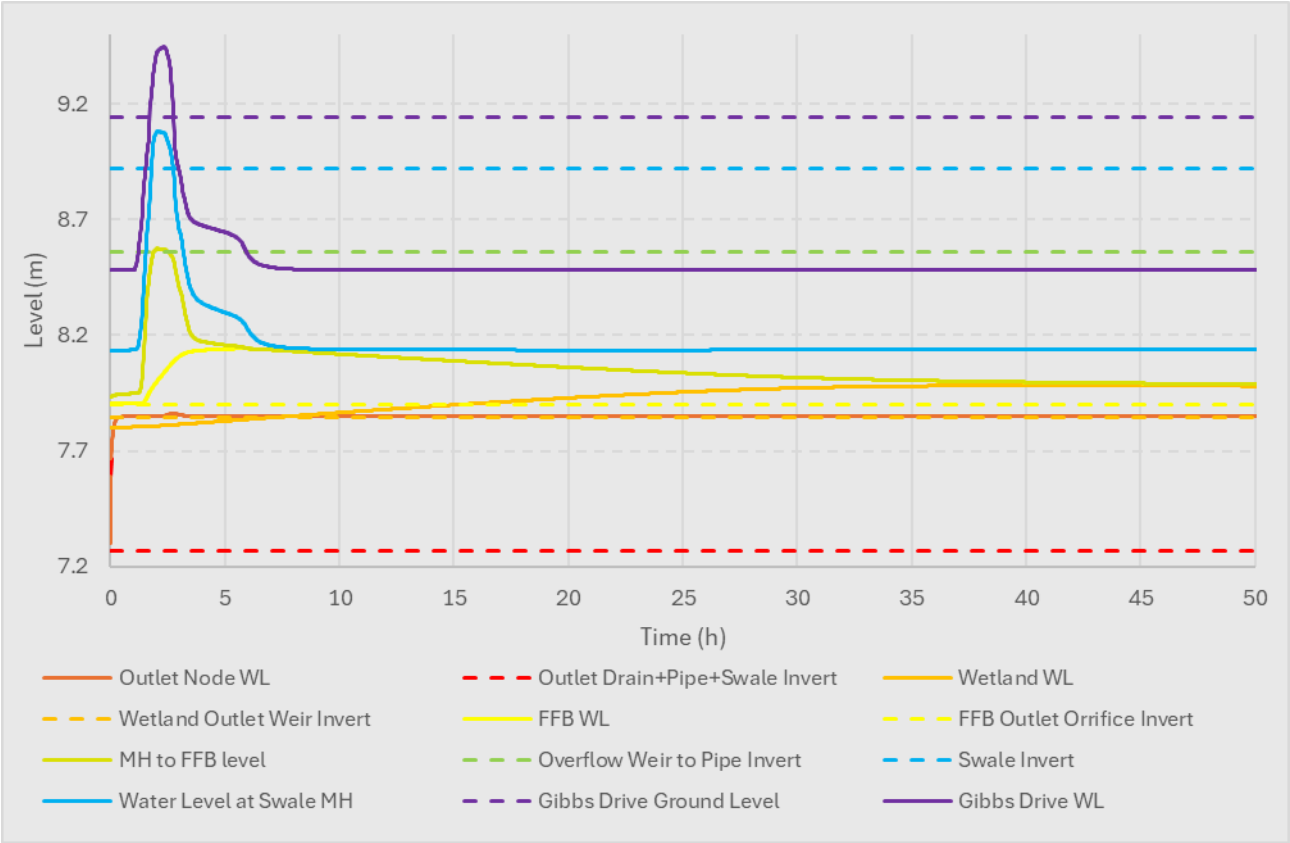

Figure 48: System hydrograph for the 25mm02h storm event.

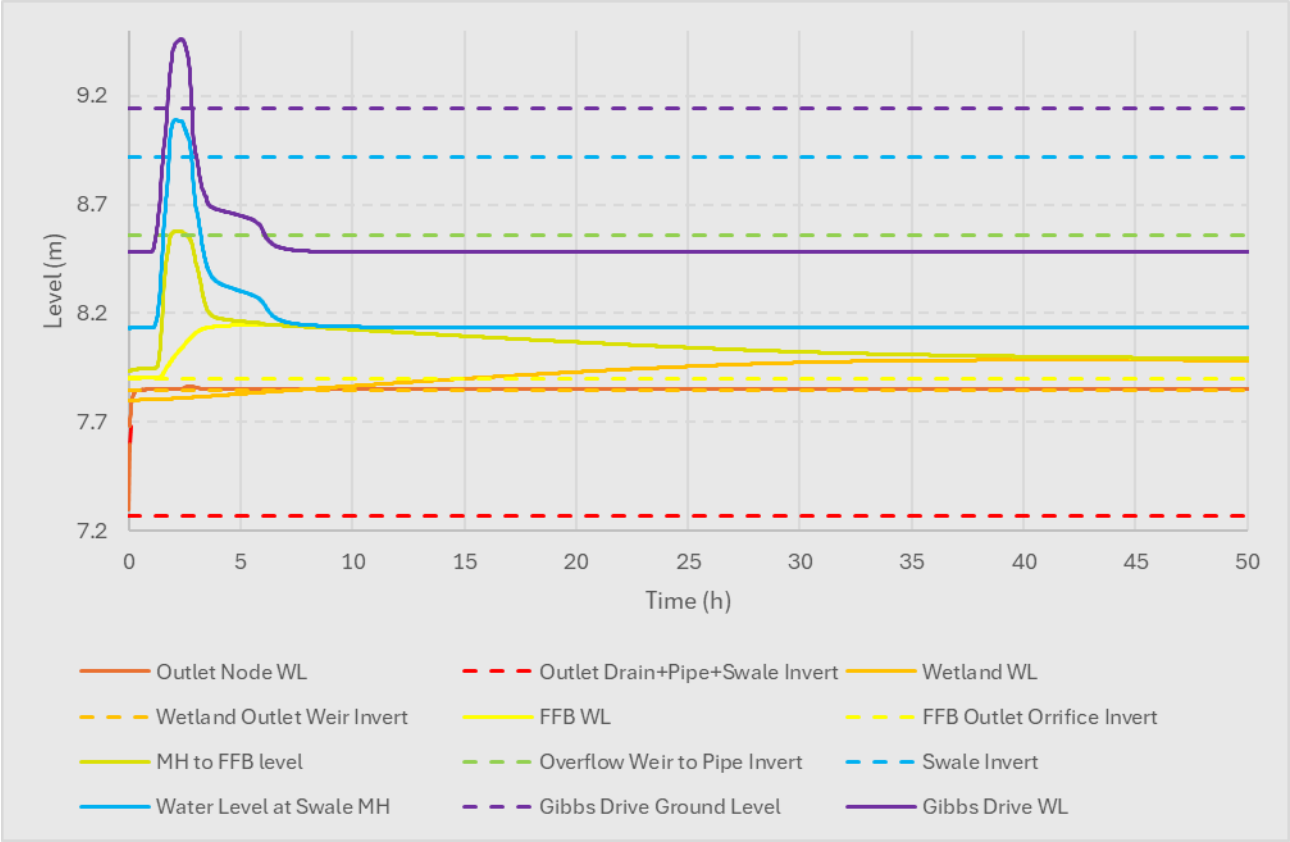

Figure 49: System hydrograph for the 005y02h storm event.

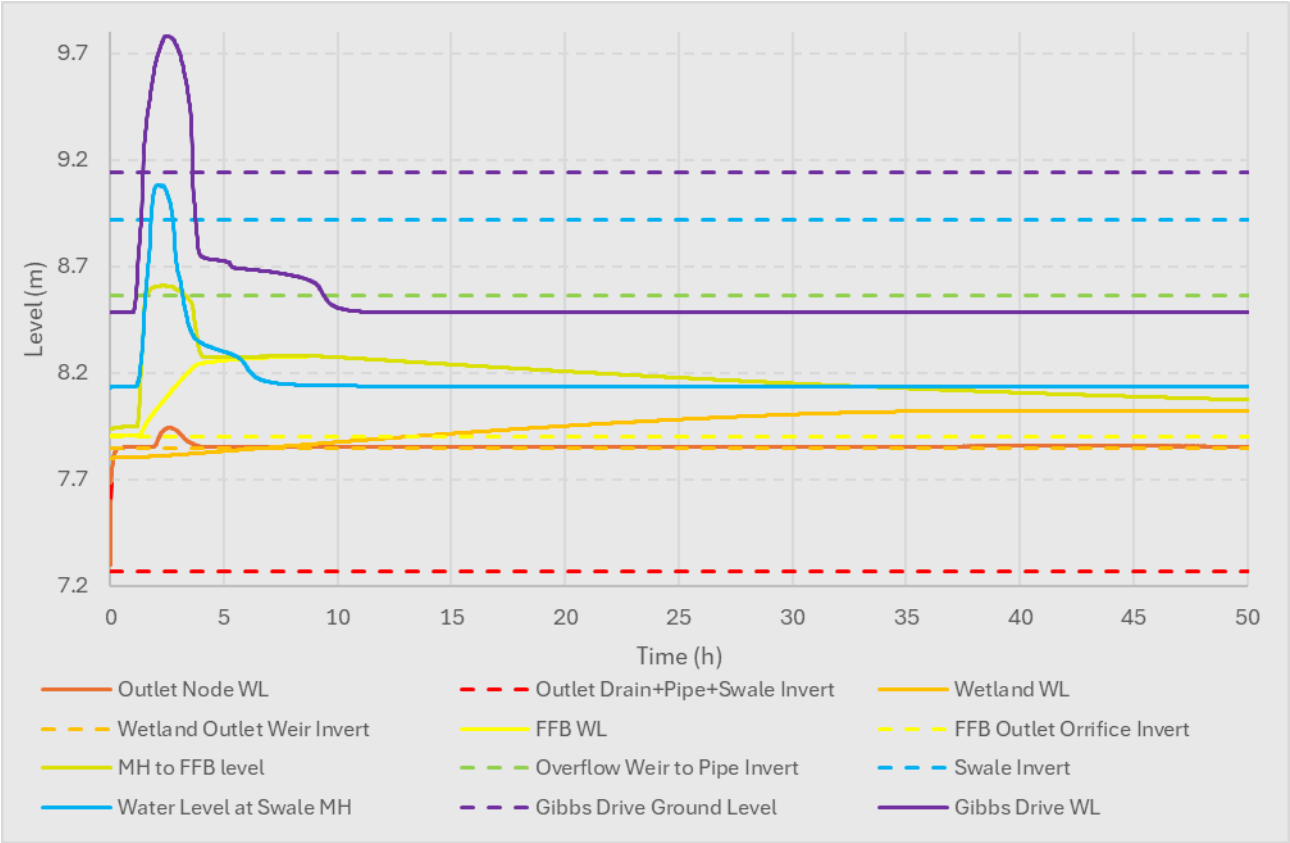

Figure 50: System hydrograph for the 050y02h storm event.

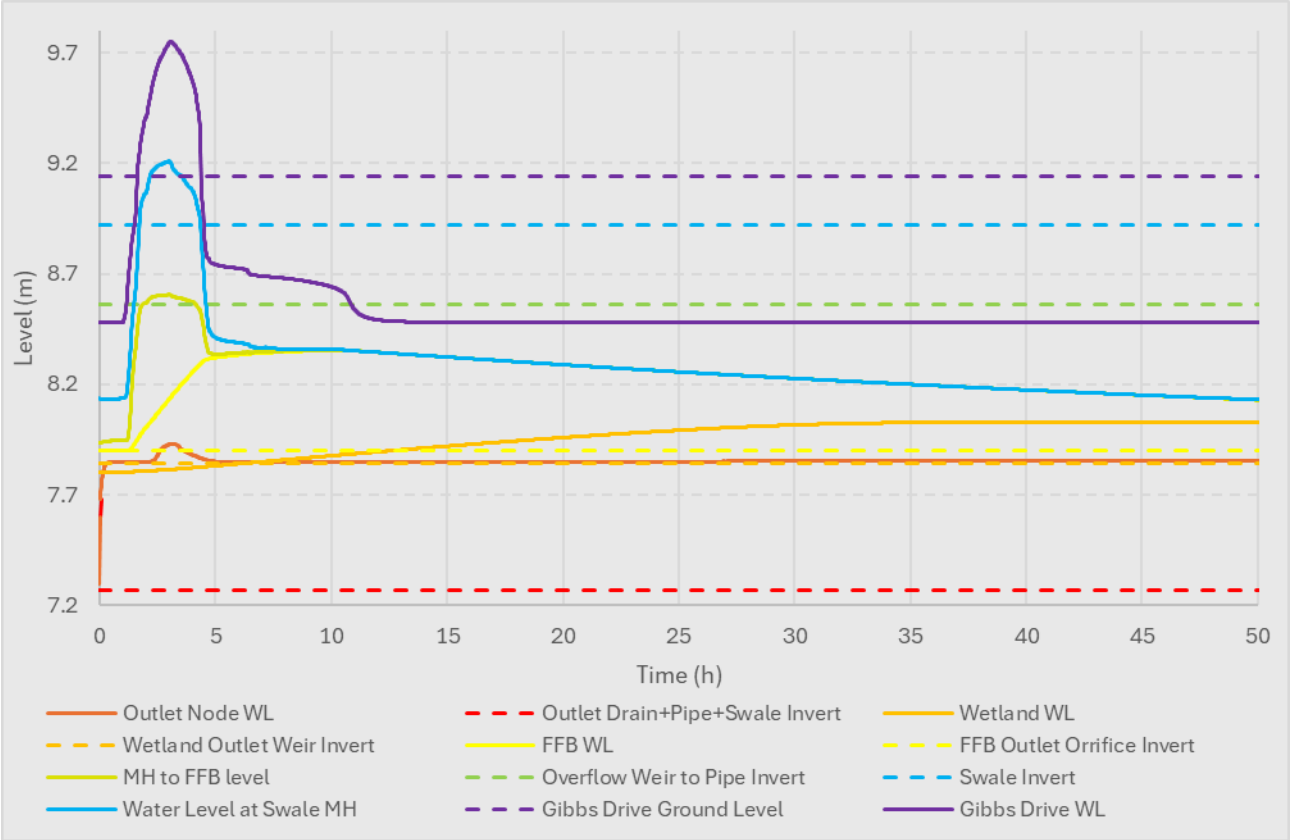

Figure 51: System hydrograph for the 050y03h storm event.

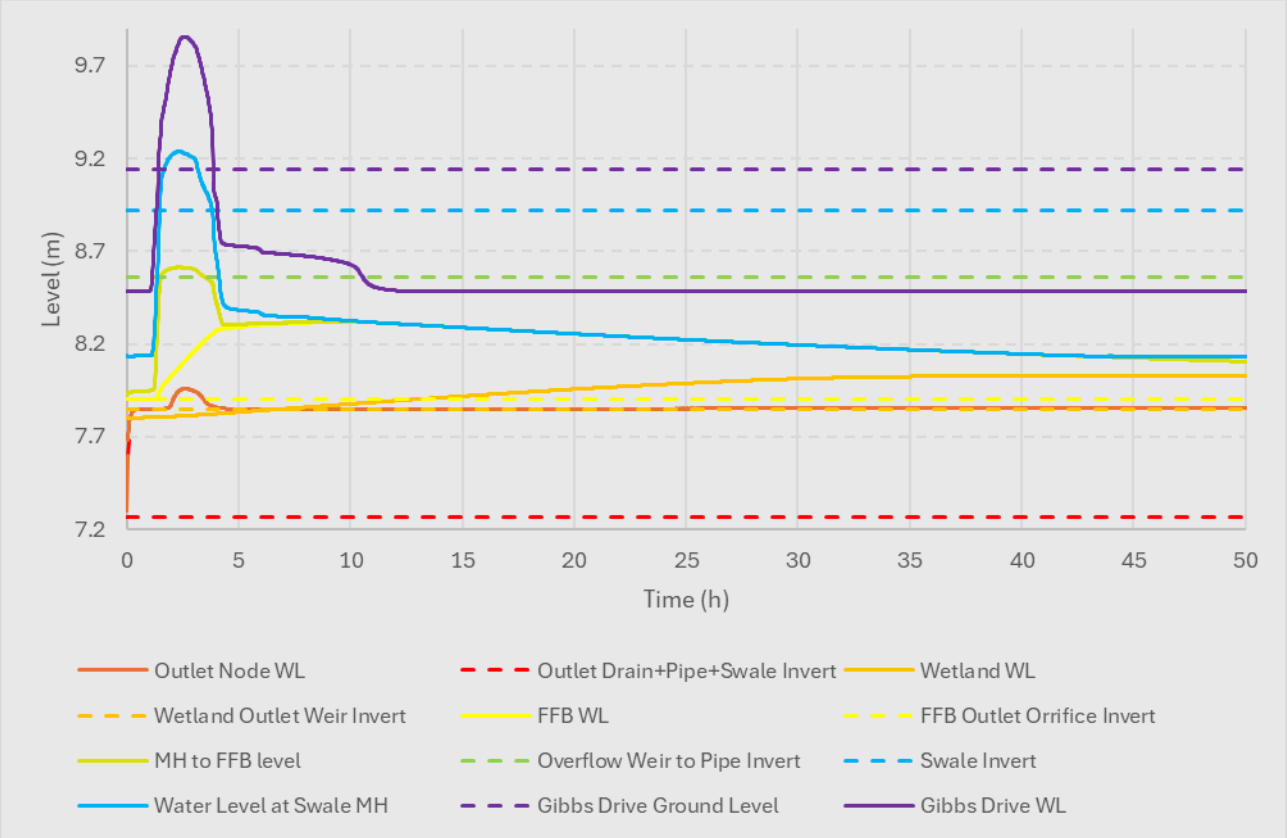

Figure 52: System hydrograph for the 200y02h storm event.

These hydrographs show that there are currently head losses occurring in the system in the manhole and pipe connecting Box Drain into the new first flush basin. These head losses cause water to back up along Box Drain spilling into the swale. This impact could be mitigated with the introduction of a larger pipe, and this may be investigated in future work.

5.2.5. Impacts on Gibbs Drive

To understand the impacts of the proposed infrastructure on flooding upstream analysis has been conducted to examine the water levels along the stormwater pipes leading up Gibbs Drive. This long section is taken using MIKE+ and a map of the examined pipes are shown below in Figure 53. Table 4, below, shows the water levels comparisons in Gibbs Drive in each of the events with and without infrastructure.

Table 4: Water level comparisons in Gibbs Drive for the different storm events at node 0436.

Event	Max WL Existing (m)	Max WL Infrastructure (m)	Existing - Infrastructure (m)
25mm 02h	9.66	9.45	0.21
005y 02h	9.67	9.46	0.21
050y 02h	9.84	9.78	0.06
050y 03h	9.80	9.75	0.05
200y 02h	9.89	9.87	0.02

Figure 53: Long section used to examine upstream impacts of the proposed infrastructure.

With this long section comparisons and hydrographs were created between scenarios with and without infrastructure for the 25mm02h, 005y02h, 050y02h, 050y03h, and 200y02h rainfall events. These comparisons can be seen below in Figures 54 to 63.

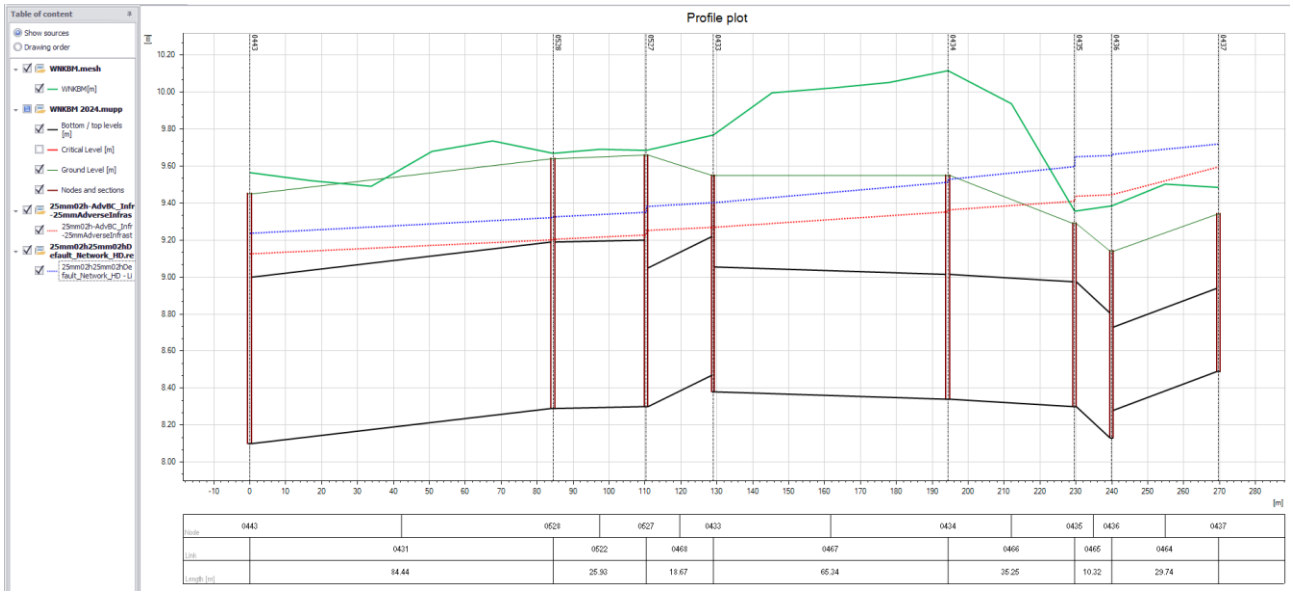

Figure 54: Comparison of upstream flooding for a 25mm02h storm event with present state (blue) and proposed infrastructure (red).

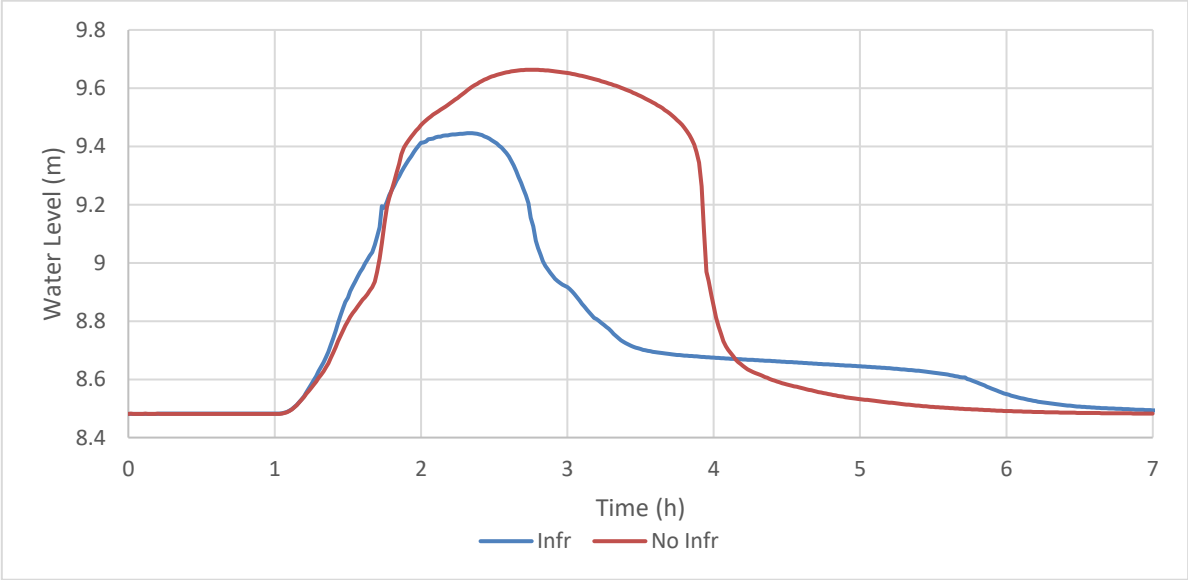

Figure 55: Hydrograph showing water levels at Gibbs Drive with and without infrastructure for a 25mm storm event.

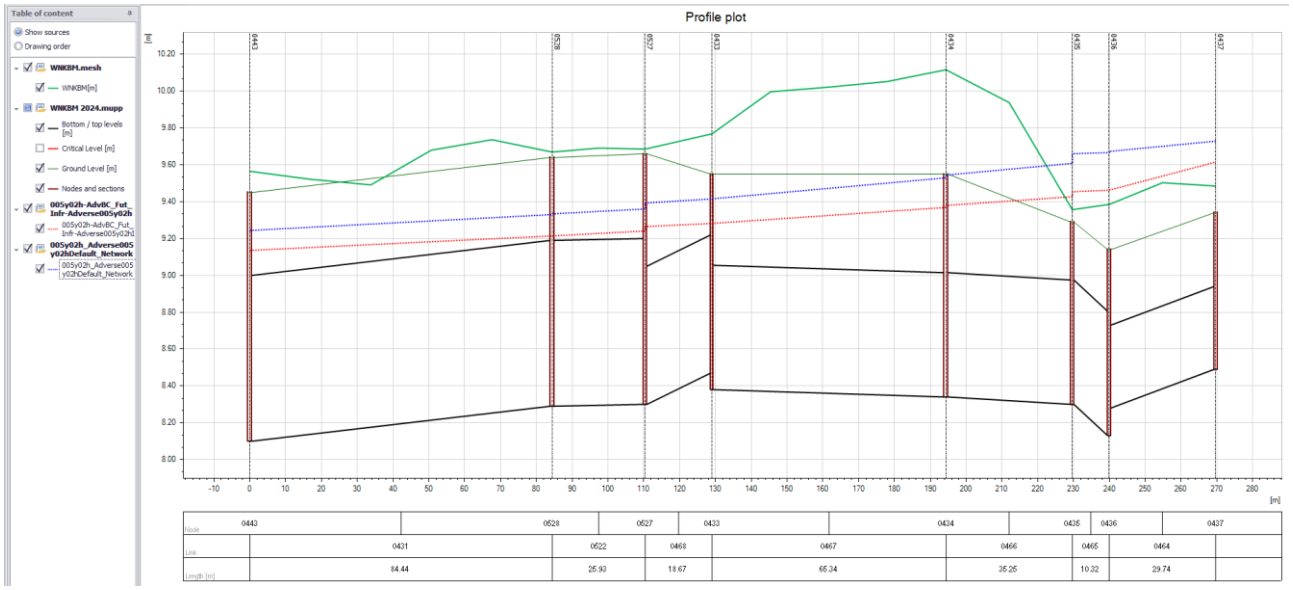

Figure 56: Comparison of upstream flooding for a 005y02h storm event with present state (blue) and proposed infrastructure (red).

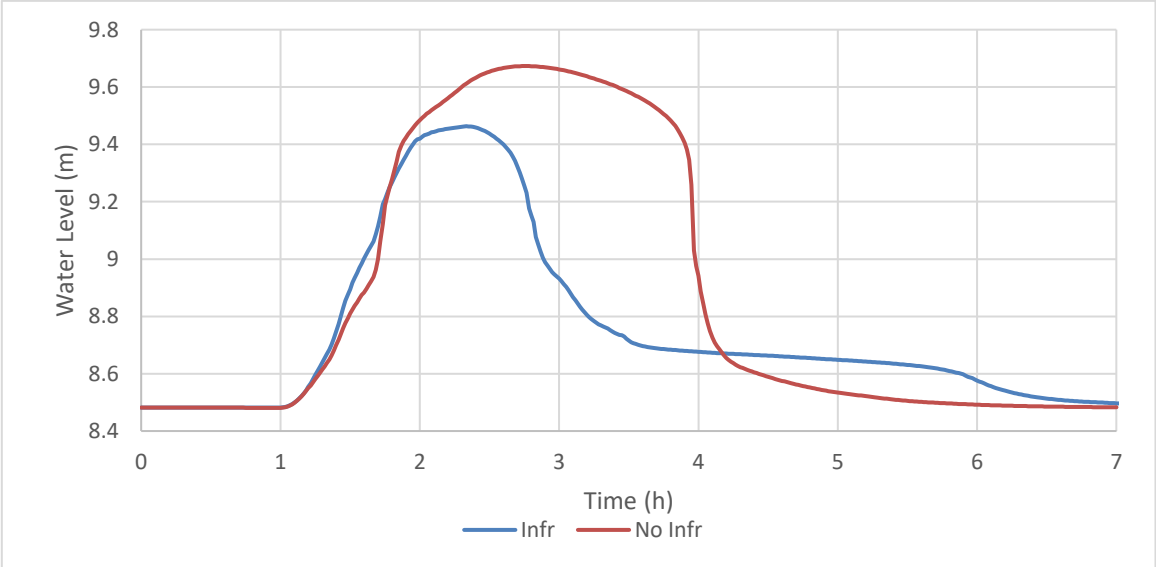

Figure 57: Hydrograph showing water levels at Gibbs Drive with and without infrastructure for a 005y02h storm event.

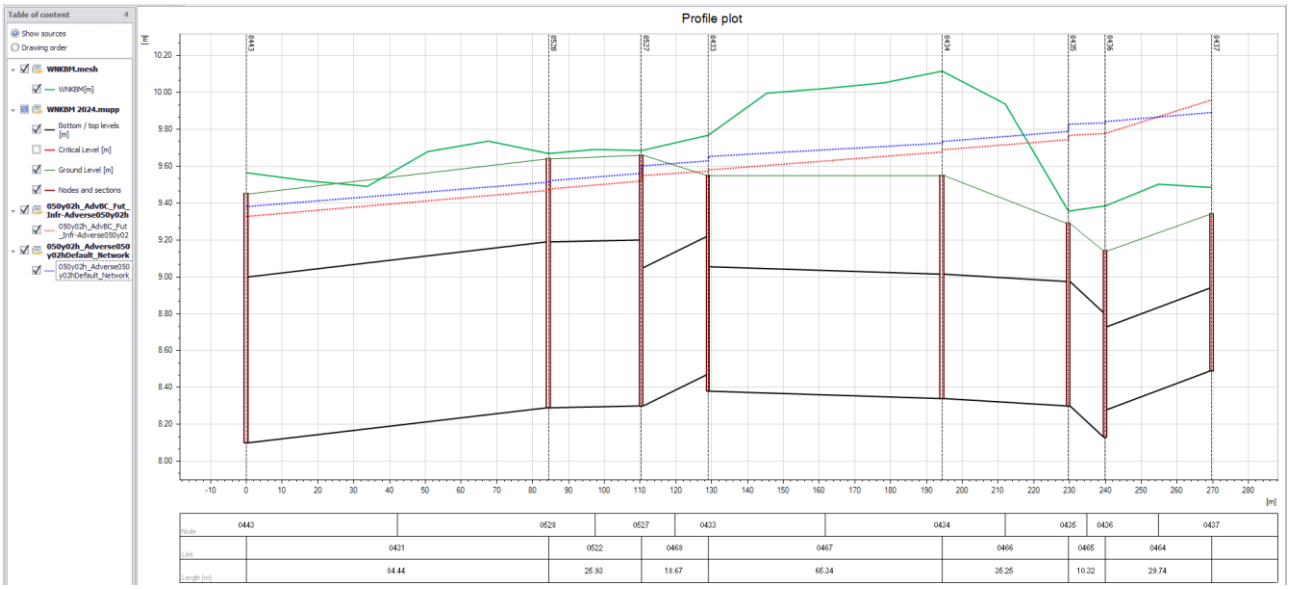

Figure 58: Comparison of upstream flooding for a 050y02h storm event with present state (blue) and proposed infrastructure (red).

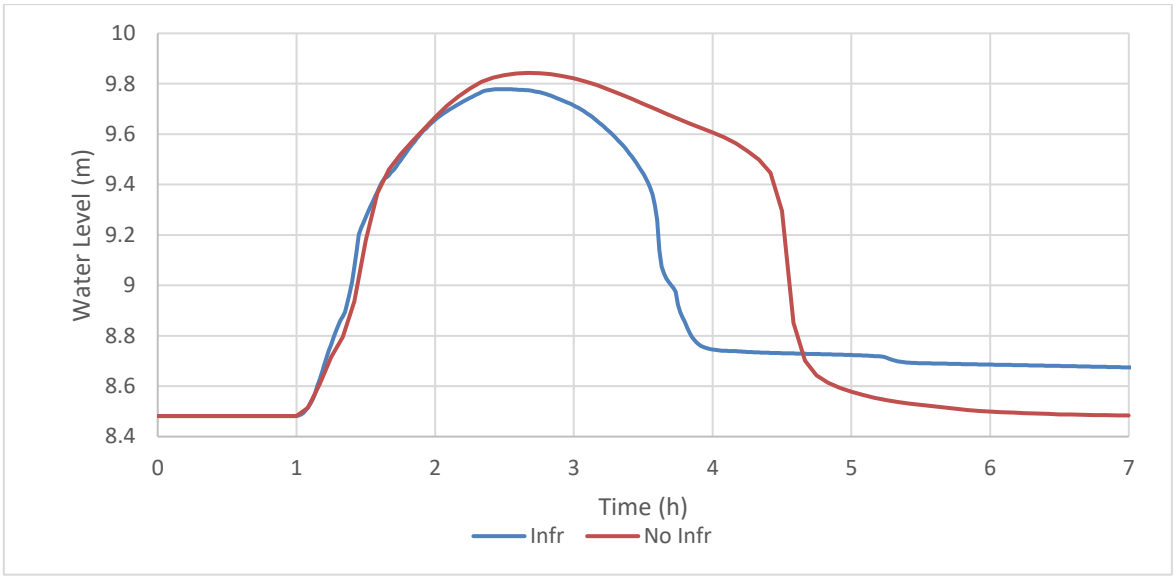

Figure 59: Hydrograph showing water levels at Gibbs Drive with and without infrastructure for a 050y02h storm event.

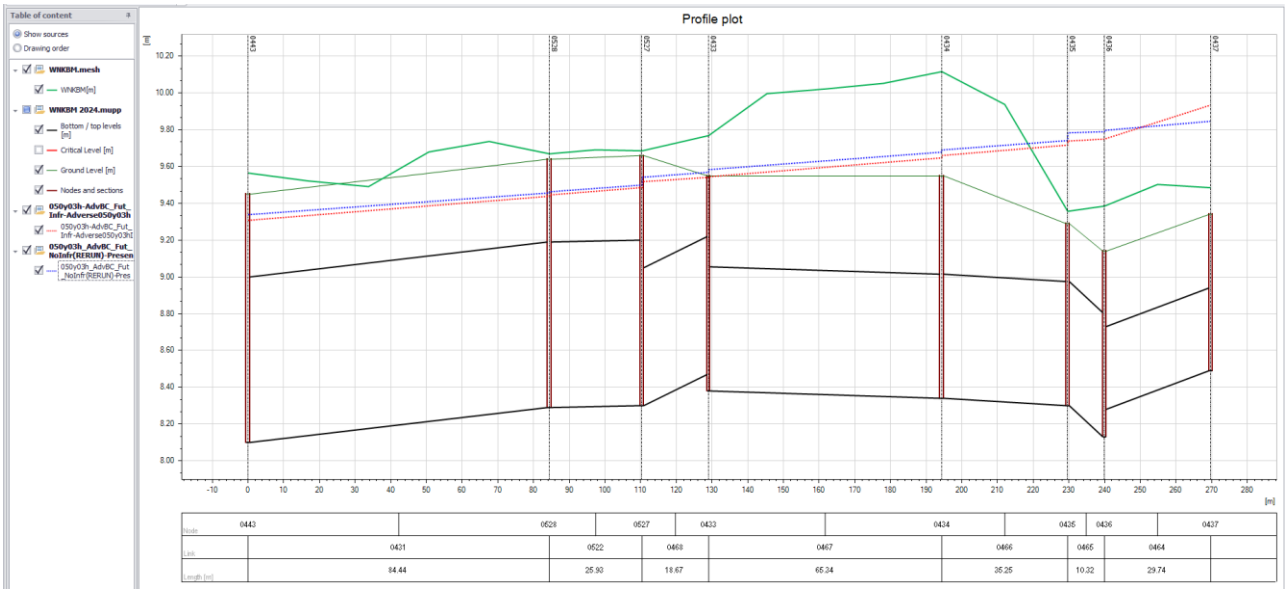

Figure 60: Comparison of upstream flooding for a 050y03h storm event with present state (blue) and proposed infrastructure (red).

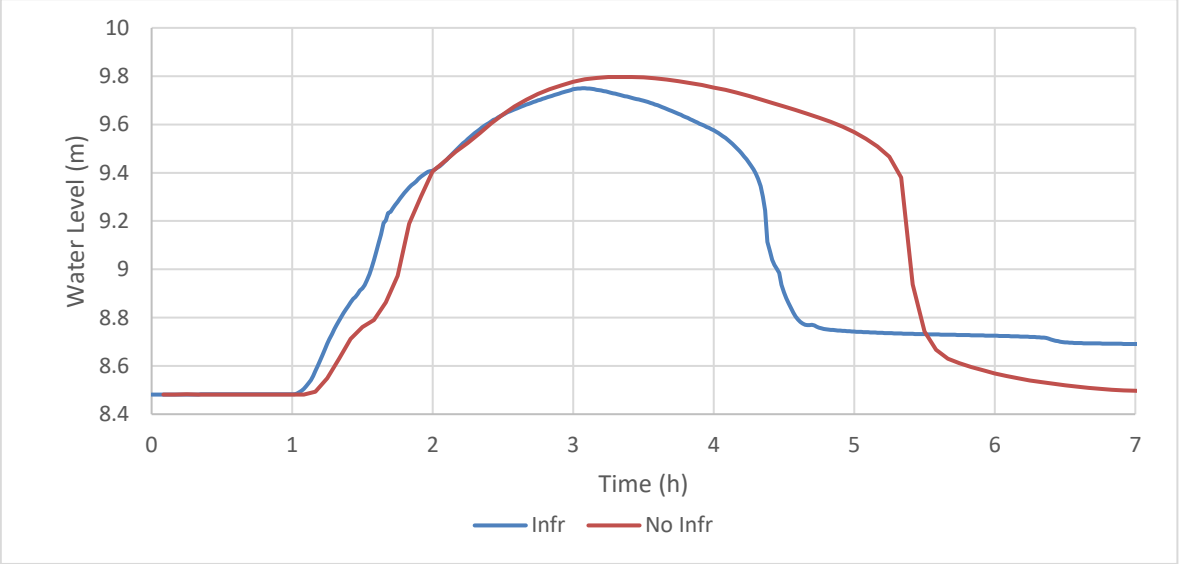

Figure 61: Hydrograph showing water levels at Gibbs Drive with and without infrastructure for a 050y03h storm event.

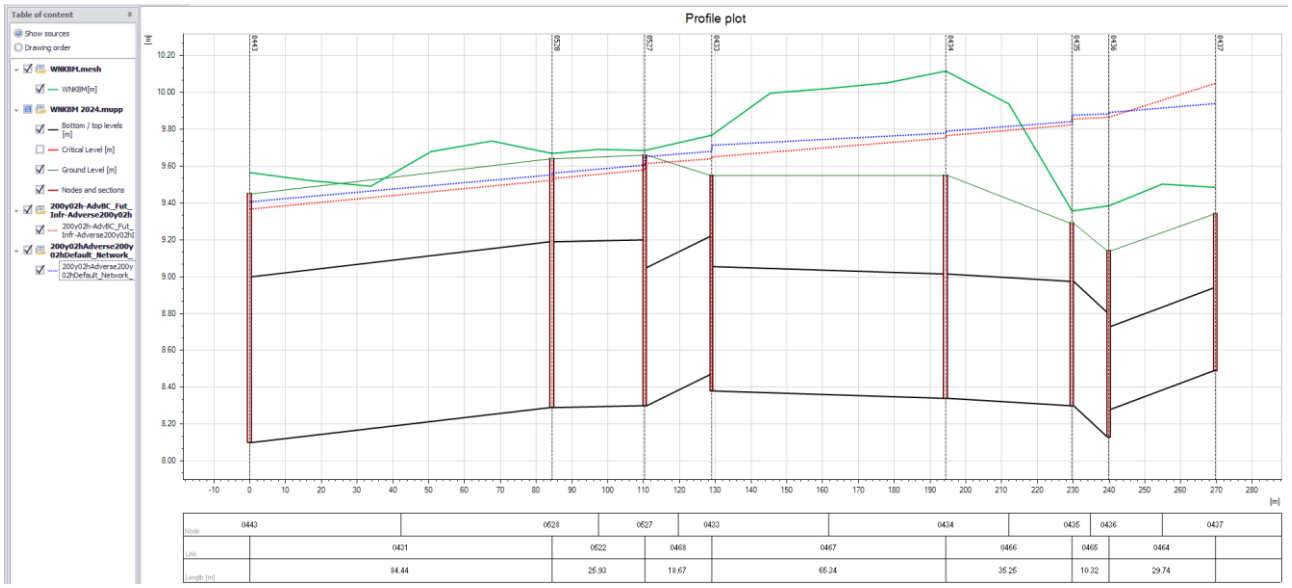

Figure 62: Comparison of upstream flooding for a 200y02h storm event with present state (blue) and proposed infrastructure (red).

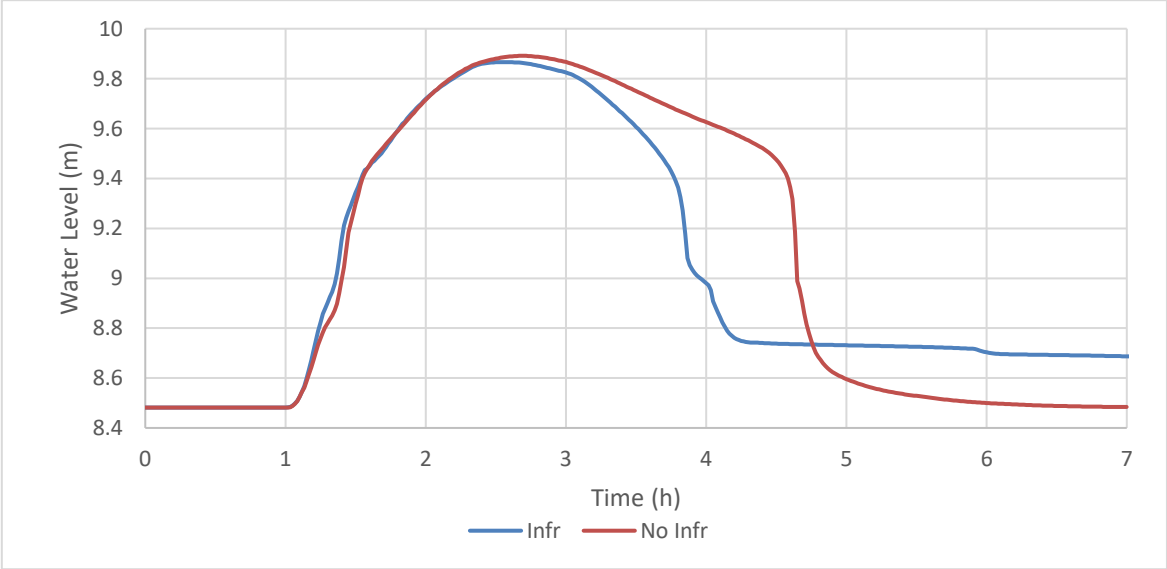

Figure 63: Hydrograph showing water levels at Gibbs Drive with and without infrastructure for a 200y02h storm event.

These results show that for smaller storm events, specifically the 25mm 2-hour and 5-year 2-hour events, there is a noticeable reduction in the flooding upstream. In the 50-year events and 200-year 2-hour event there is small improvement seen following the stormwater pipelines, but at the end of this section there is a slight worsening. The difference here is unexpected and is likely a result of the base model being run in 2D and the model with infrastructure being in 1D. Overall the benefits upstream are much more prominent in smaller storm events.

6. Conclusion and Recommendations

This report was undertaken to provide hydraulic information regarding the Waimakariri District Council's proposed stormwater facility on Box Drain. The information found in this report will then be used to assess the feasibility of the current preferred design for the stormwater facility.

Before examining the proposed stormwater infrastructure, the impacts of an adverse flow scenario in Box Drain needed to be examined. To do this, various methods were trialled to induce an increased water level at the Box Drain pipe outlet similar to that indicated in reality. This found the best method to induce this adverse effect with the introduction of an inflow to node of 0.765 m^3/s at the node immediately following the final node of Box Drain.

The next stage involved digitising the infrastructure in MIKE+ and verifying that the model is functioning as intended. Upon the completion of this the model was used to run a range of storm events through the model with the new infrastructure. This found that in all cases ranging from 1 in 5-year to 1 in 200-year storm events the infrastructure was able to attenuate the flow. For the 1 in 200-year event this reduces the peak flow out of box drain from approximately 1.47 m^3/s to 0.26 m^3/s and for the 25mm rainfall event from 0.53 m^3/s to 0.03 m^3/s.

The impact of the adverse condition on the function of the new infrastructure was also examined. This found that an impact could only be seen in the 50 and 200-year events, and that impact though visible in the graphs was negligible.

The inflows, outflows, and levels of the first flush basin and wetland were examined in storm events and are provided as graphs in this report. In addition to this the impact on surface flooding along Gibbs Drive was examined and this found that a notable reduction was seen in the 25mm and 1 in 5-year 2-hour events, and a small reduction was seen in the 50y and 200y 2-hour events.

It is recommended that:

- This report is provided to the interested parties including the WDC stormwater asset manager and consultants designing the new pond infrastructure.
- Results of this report be used to inform the feasibility of the preferred option for the stormwater infrastructure.
- Any changes to the preferred option for the stormwater infrastructure are run through the same model to check their feasibility.

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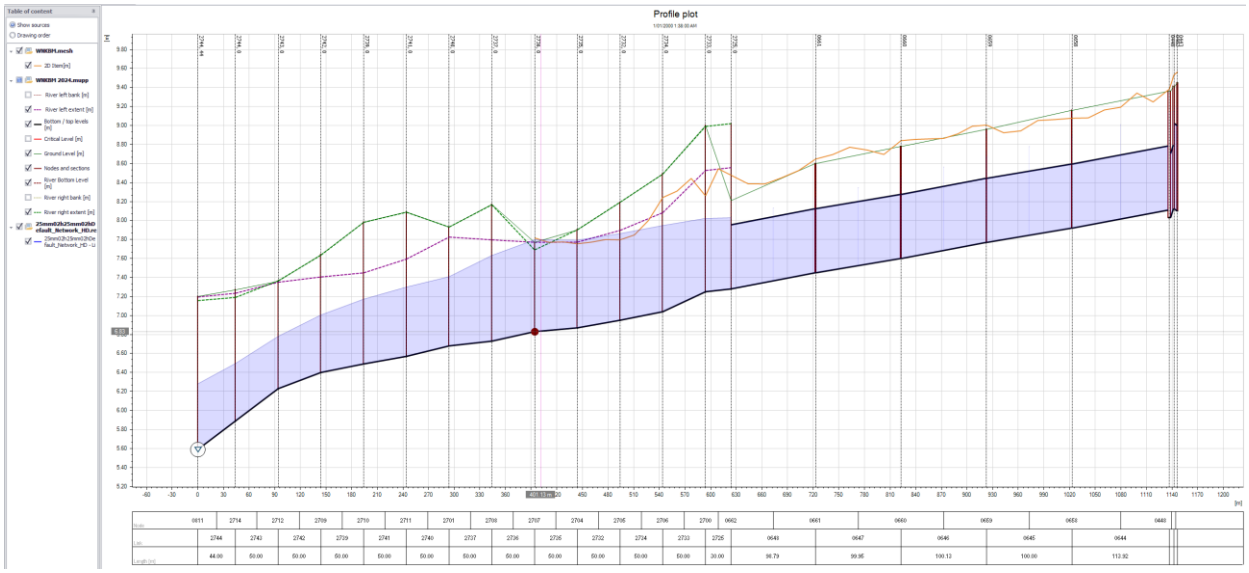
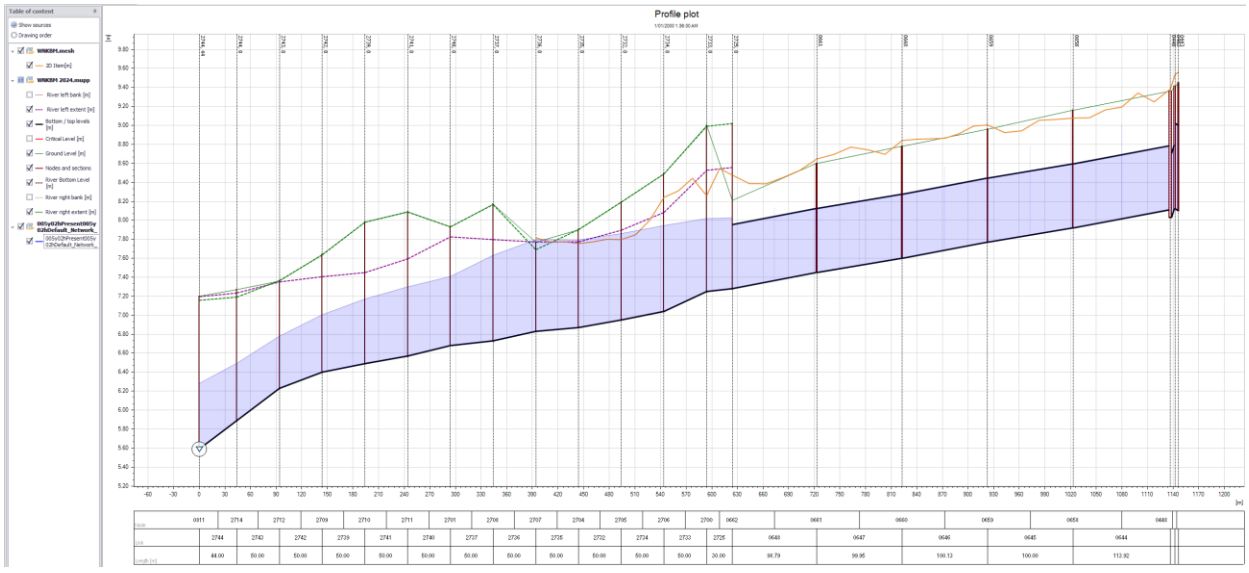
APPENDIX A - Stage 1 Results

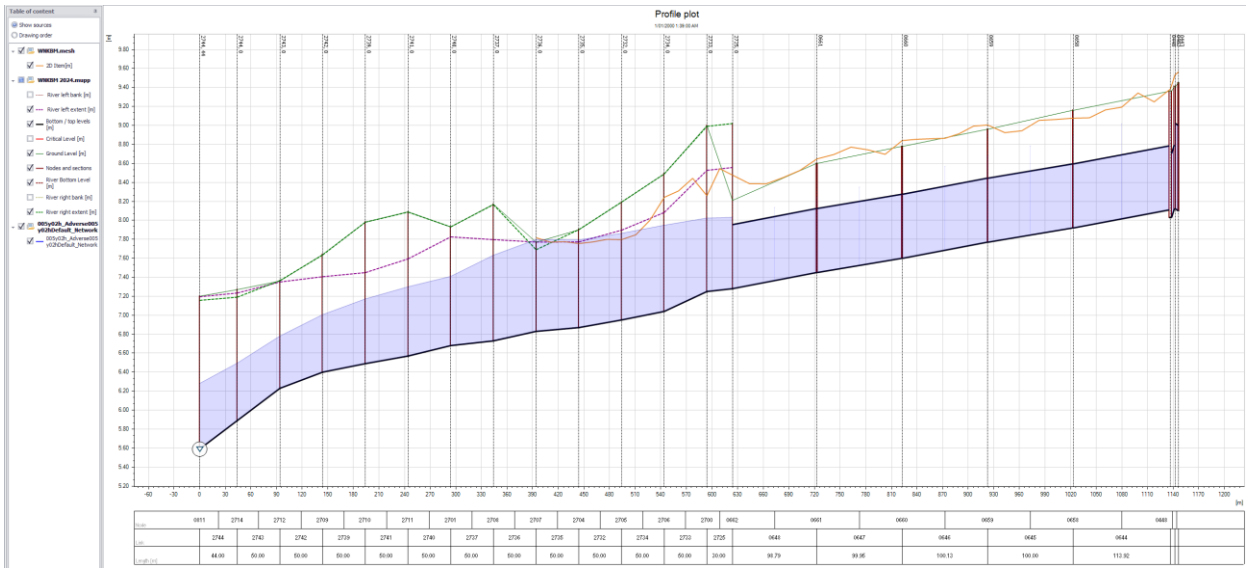
25 mm Rain Event:



005y02h Present:



005y02h Future:



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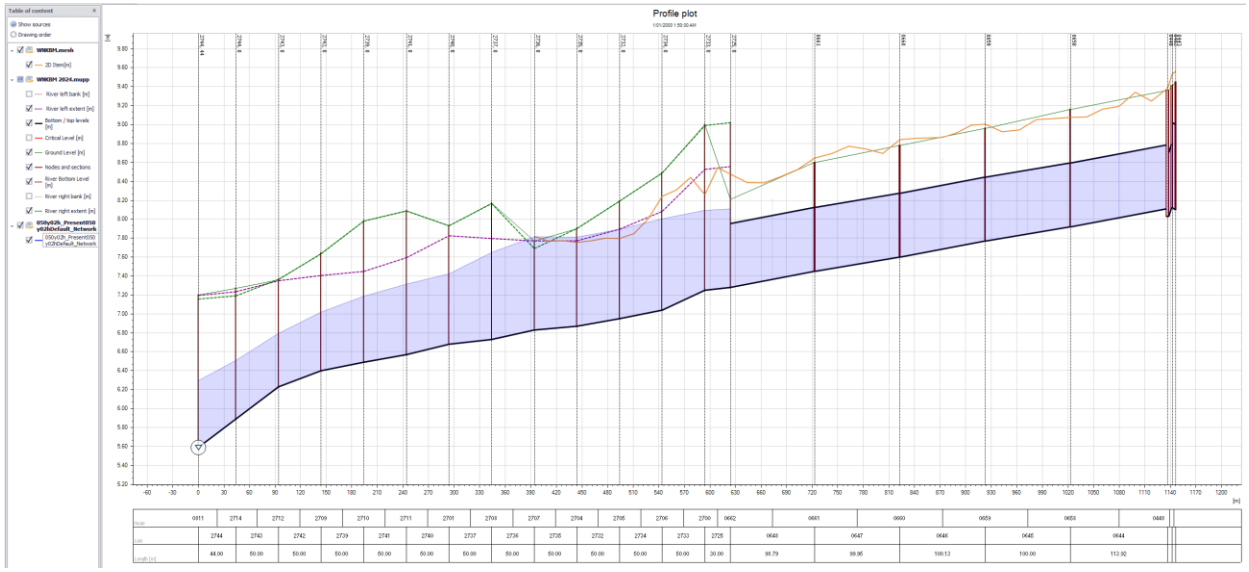
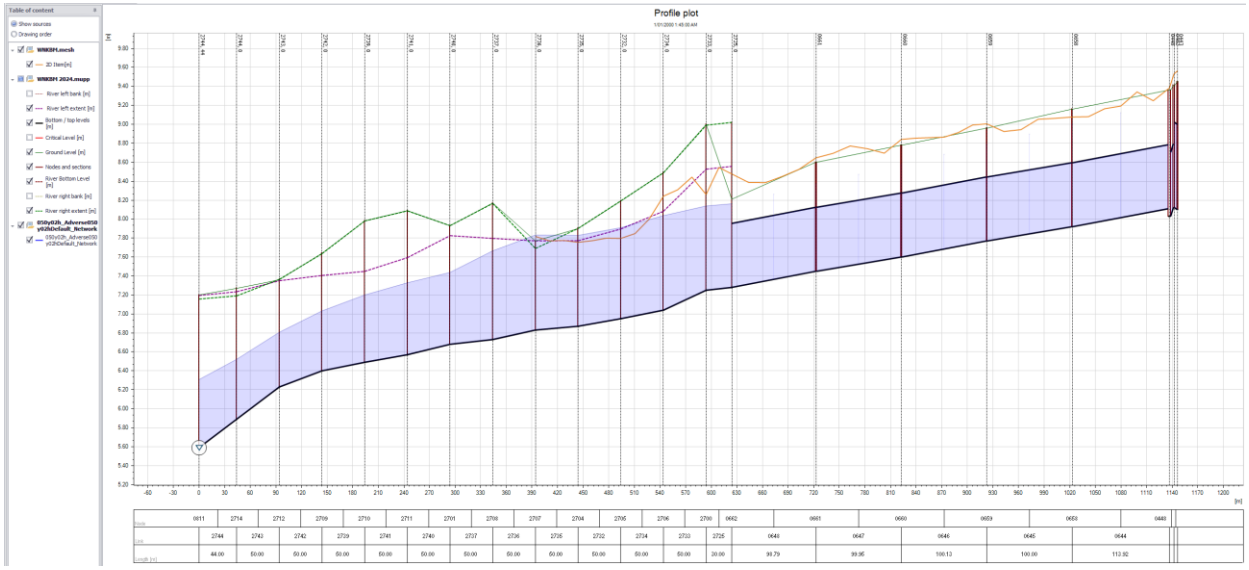
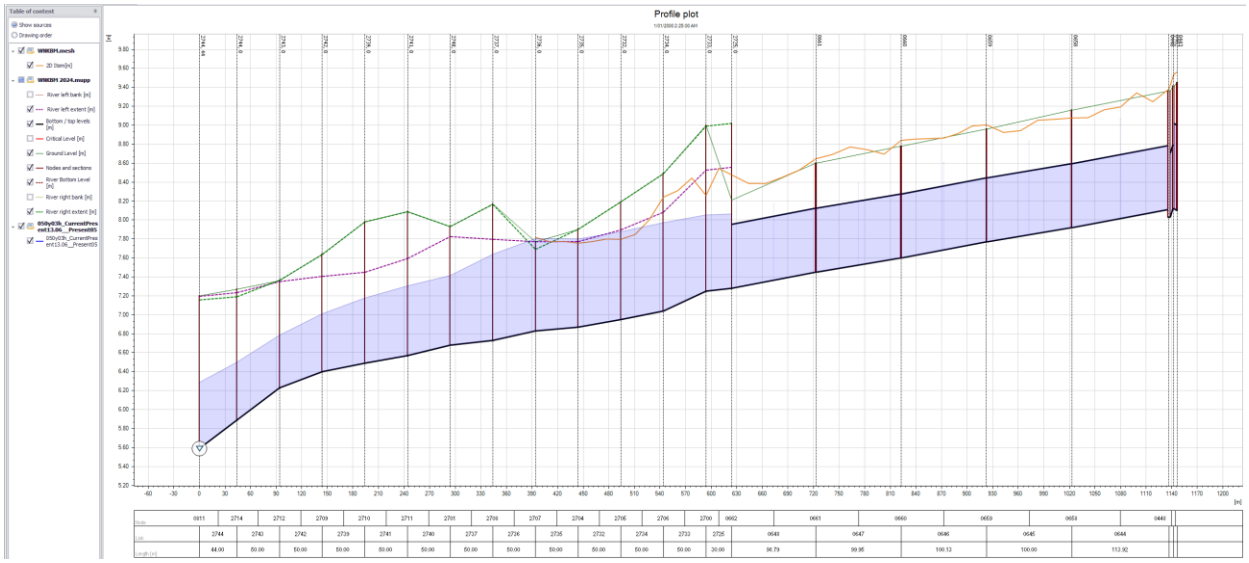


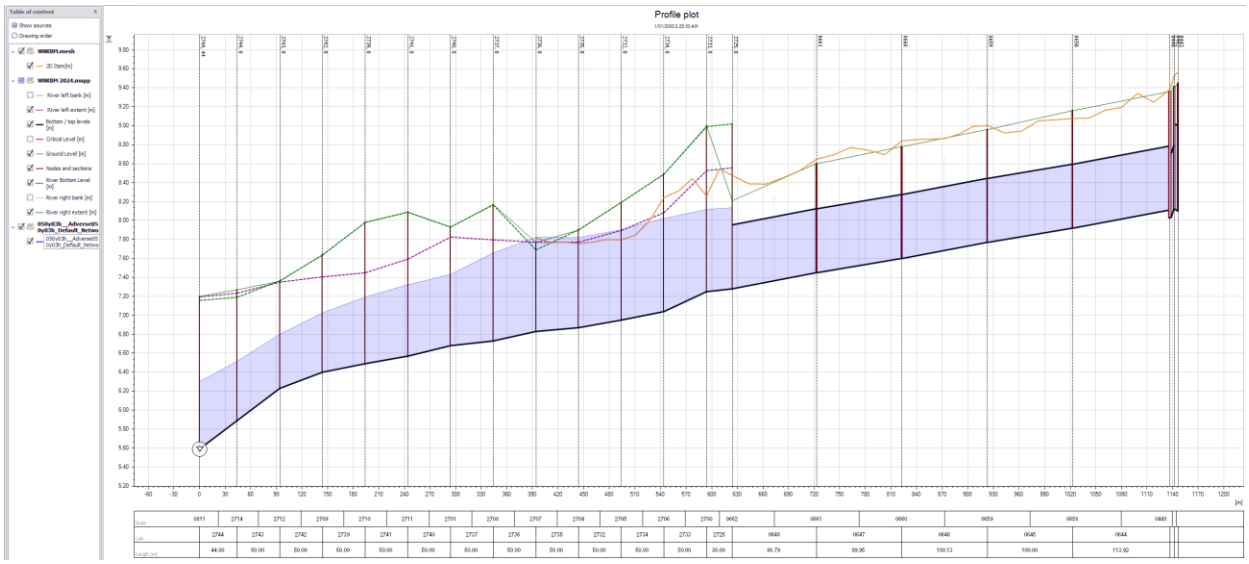
050y02h Future:



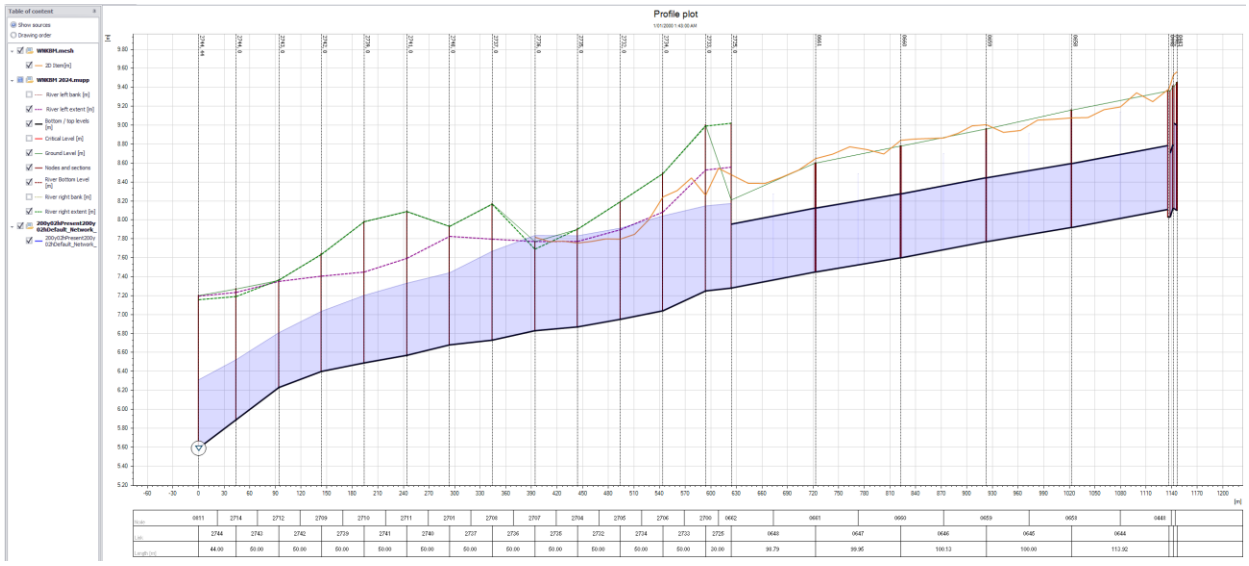
050y03h Present:



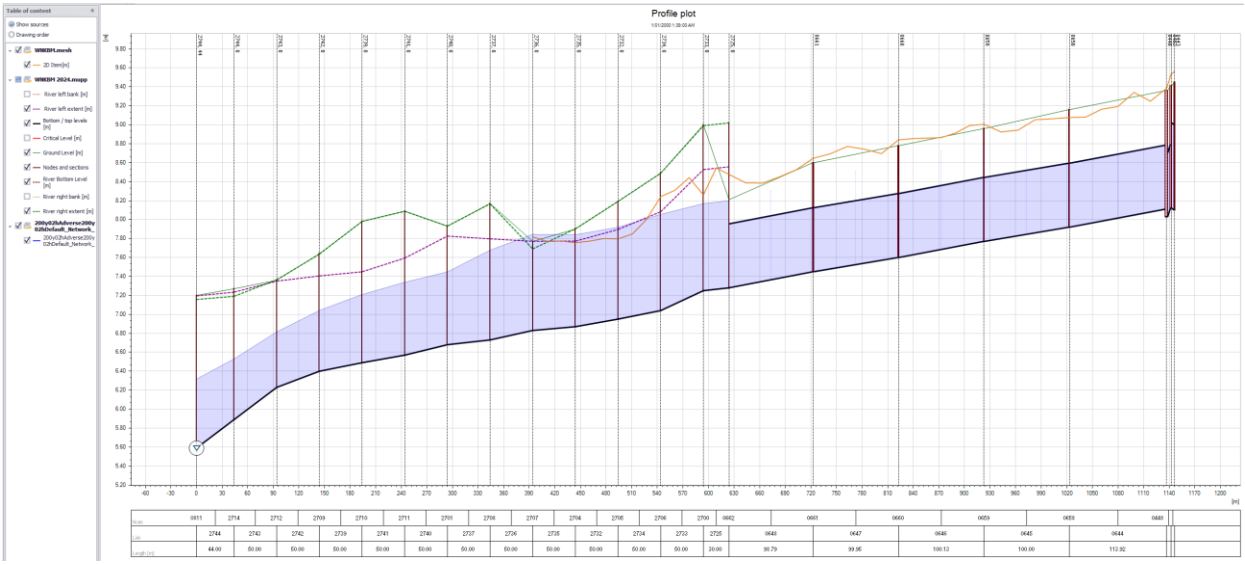
050y03h Future:



200y02h Present:



200y02h Future:



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WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR DECISION

FILE NO and TRIM NO:	RDG-32-123-08 / 251105210048
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Rob Kerr, Programme Manager
SUBJECT:	Rangiora Eastern Link: Next steps to revise concept design and approval of expenditure
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / pp Chief Executive

1. SUMMARY

1.1. The purpose of this report is to update Council on the progress on the Rangiora Eastern Link, set out the next key steps and seek approval to bring forward budget from next financial year for the related expenditure.

1.2. Since confirmation of co-funding by NZTA of the Business Case and Concept Design of the Rangiora Eastern Link (REL), the project team has materially advanced the project. This has included completion of a draft Concept by WSP, preparation of the Business Case and delivery of a cost estimate for the project.

1.3. The REL is a complex project, and the reason why the concept design stage was bought forward alongside the Business Case (the design is normally done after the business case) is to allow the risks and issues to be identified and addressed, leading to a more robust cost estimate.

1.4. While good progress has been made, the team have not yet completed development of the final concept, and additional expenditure is requested to enable the remaining issues and risks to be addressed. This includes the appropriate flood mitigation standard, soil contamination risks and the earthworks management strategy.

1.5. Further expenditure will be via variations to existing arrangements with WSP (designer), the REL Programme Manager, Early Contractor Involvement and PDU (modelling) costs. This expenditure is unbudgeted, and approval is sought to bring forward $255,000 from next financial year's budget in order to progress the project and seek to develop a robust and affordable design concept suitable for consideration by NZTA and Council.

1.6. The intent is for this work to enable a revised cost estimate with a completed Business Case for Council consideration in the February 2026 meeting.

2. RECOMMENDATION

THAT the Council

(a) **Receives** Report No. 251105210048.

(b) **Approves** bringing forward $255,000 from the FY26/27 Rangiora Eastern Link budget (PJ 102432.000.5133) which has an available budget of $5,000,000 (of which 51% is assumed to be subsidised) to fund additional design work and enable the project to continue to progress.

(c) **Notes** that this additional expenditure will not be subsidised by NZTA as it is exceeding the Business Case and Concept Design budget, and approval has not yet been given for the remainder of the spend.

(d) **Notes** that a report will be brought to the February Council meeting with an updated cost estimate, a recommended draft Business Case for sending to NZTA and a full summary of the financial effects.

3. BACKGROUND

3.1. A Notice of Requirement (2021) was prepared for the Proposed Waimakariri District Plan to establish a Designation for the land required for a Rangiora Eastern Link (REL) west of the Wastewater Treatment Plant and north through to Spark Lane. A range of technical studies were completed to address potential areas of risk and environmental impact to support the Notice of Requirement.

3.2. Development Contributions were agreed with the developers of Bellgrove through a Private Development Agreement, and these are now reflected in the Development Contributions Policy. Parts of the Rangiora Eastern Link north of Northbrook Road have already been constructed (or will be constructed) through agreement with developers as part of the subdivision process for residential land. This work also included preparation of an initial cost estimate for the project, and a budget of $35 million was included in the Long Term Plan 2024-2034.

3.3. The route of the new Rangiora Eastern Link is now designated in the District Plan and NZ Transport Agency confirmed co-funding for the Business Case and Concept Design in December 2024.

3.4. In April 2025, Council decided the route for the REL, adopting the Strategic and Economic Cases in support of this decision. These note that key transport challenges that the REL will assist with mitigating include:

- Severe congestion due to growing traffic volumes.
- Insufficient transport links for new growth areas, and
- Increased travel volumes increasing safety risks.

3.5. Addressing these issues will improve travel times, reliability, safety, and support economic growth. The Economic Case assessed options to achieve these benefits. The analysis considered various solutions, concluding that expanding transport capacity is necessary.

3.6. A shortlist of routes was developed. Elected members and community stakeholders provided feedback on the shortlist of options, summarised in the report. Input from affected landowners was also sought. A cross-agency group, including Council, NZ Transport Agency, and Ngāi Tūāhuriri representatives, assessed the shortlisted options against investment objectives and key criteria which led to recommendation of the route to Council.

3.7. Council adopted the designated route west of the Wastewater Treatment Plant (WWTP) and the concept design and the balance of this business case has been developed on that basis.

4. ISSUES AND OPTIONS

4.1. Since confirmation of co-funding by NZTA of the Business Case and Concept Design of the Rangiora Eastern Link (REL), the project team has materially advanced the project. This has included development of a draft Concept by WSP and preparation of the Business Case.

4.2. The REL is a complex project, and the reason why the concept design stage was bought forward alongside the Business Case (the design is normally done after the business case) is to allow the risks and issues to be identified and addressed, leading to a more robust cost estimate.

4.3. While good progress has been made, the team have not yet completed development of an efficient concept, and additional expenditure over the current budget is proposed to enable the remaining issues and risks to be addressed. This includes the appropriate flood mitigation standard, soil contamination risks and the earthworks management strategy.

4.4. If the requested budget is not bought forward, then completion of the Business Case will not be completed until late 2026, and the window to seek earlier co-funding from NZTA will be missed.

4.5. Subject to the decisions in this paper, it is intended for the proposed revised concept design and business case to be brought to Council for consideration (and subsequent submission to NZTA to seek co-funding) in February 2026.

Implications for Community Wellbeing

There are implications on community wellbeing by the issues and options that are the subject matter of this report. The balance between costs and level of service needs to be carefully considered to provide the optimum solution for community wellbeing.

5. COMMUNITY VIEWS

5.1. Mana whenua

Whitiora (on behalf of Ngāi Tūāhuriri) have been engaged in the development of the business case and concept design.

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. NZ Transport Agency has participated in workshops and co-funds the concept design and business case.

Staff have met several times with the neighbours of the new road around Marsh Road and incorporated their feedback into the development of the design. However no further contact is planned until there is a clearer picture about the agreed concept design.

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. Prior engagement through the Long Term Plan indicates support for progressing the REL to relieve congestion and unlock growth.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. **Financial Implications**

Expenditure this financial year has been $246,000 (until end of October) against a budget of $255,000, of which $56,868 is from NZTA (being the balance of the co-funding received for the Business Case and Concept Design).

The total unsubsidised expenditure over the budget this financial year is forecast to be $66,000 plus additional expense required to implement the above scope of works. This additional work is estimated at $150,000, leading to additional forecast expenditure this financial year of $216,000. To provide an additional level of contingency, it is recommended that provision is made for $255,000 forecast additional expenditure.

The budget for next financial year (FY26/27) is $5,000,000.00, which allows for progressing design, consenting and land acquisition. Co-funding of this expenditure from NZTA is assumed in the Long-Term Plan.

Approval is sought to bring forward expenditure from next financial year to enable the additional value engineering work to proceed, noting that this funding will be transferred from a ‘subsidised’ budget to an ‘unsubsidised’ one. Therefore, a budget reduction of approximately $500,000 in 2026/27 will be required to provide $255,000 of ‘local share in 2025/26.

It is anticipated that a revised budget profile will be included in the Long Term Plan once the final cost estimate (and budget) and timing of NZTA contributions is confirmed.

Financial Year	Original Budget	Proposed revised budget	Change
FY25/26	$255,000	$510,000	+ $255,000
FY26/27	$5,000,000	$4,500,000	- $500,000

6.2. **Sustainability and Climate Change Impacts**

The recommendations in this report do have sustainability and/or climate change impacts. Ensuring a road design that properly accounts for climate change effects is required.

6.3 **Risk Management**

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

- The affordability of the project
- The impact on securing co-funding;
- The timeframe for which NZTA decision making may be able to be secured; and
- The potential impact on mana whenua values of some scope changes.

6.3 **Health and Safety**

There are not 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. However future decisions on the total budget for the REL may be a matter of significance, depending on the final estimated cost.

7.2. Authorising Legislation

The Land Transport Management Act, and Local Government Act are relevant in this matter.

7.3. Consistency with Community Outcomes

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

The following outcomes are applicable:

Environmental

…that values and restores our environment…

- *The natural and built environment in which people live is clean, healthy and safe.*

Economic

…and is supported by a resilient and innovative economy.

- *Infrastructure and services are sustainable, resilient, and affordable.*

Social

A place where everyone can have a sense of belonging…

- *Our community has equitable access to the essential infrastructure and services required to support community wellbeing.*

7.4. Authorising Delegations

The Council is able to consider this matter

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR DECISION

FILE NO and TRIM NO:	EXT-39/250909171318
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Sylvia Docherty, Strategy and Business Manager
SUBJECT:	Council submissions to Central Government Consultations for September and October 2025

ENDORSED BY:
(for Reports to Council, Committees or Boards)

General Manager | pp Chief Executive

1. SUMMARY

1.1. The purpose of this report is to provide Council with the formal opportunity to receive submissions that have been submitted to meet the timeframes of consultations but were not able to be received at a formal Council meeting prior to the submission date.

1.2. During the preparation of the Council submissions in attachments 1 and 2, various issues and options related to the topic(s) were thoroughly examined. Where time permits staff have prepared and delivered Council workshops to outline the topic and provide draft submission themes for consideration and feedback. All Council submissions were shared with Elected Members in draft form prior to final review and signature by the Mayor and Chief Executive.

1.3. There has been a significant level of legislative change proposed in recent months that reflects the Government's focus on economic growth, infrastructure delivery, welfare reform, and public service improvement.

Attachments:

i. Council submission on the Antisocial Road Use Legislation Amendment Bill (250919179110)
ii. Council submission on the Draft Standard Code of Conduct (250923181180)

2. RECOMMENDATION

THAT the Council:

(a) **Receives** Report No. EXT-39/251116217091.

(b) **Endorses** the attached submission made on 30 September 2025 to the Government's Justice Committee regarding Antisocial Road Use Legislation Amendment Bill (attachment i / 250919179110), noting that the draft submission was shared with the Council on 19 September 2025 for review and feedback.

(c) **Endorses** the attached submission made on 3 October 2025 to the Government's Local Government Commission regarding the Draft Standard Code of Conduct developed for the Local Government (System Improvements) Bill (attachment ii / 250923181180), noting the draft submission was shared with the Council on 24 September 2025 for review and feedback.

(d) **Notes** both Council submissions were shared with Elected Members in draft form prior to final review and signature by the Mayor and Chief Executive.

(e) **Notes** proposed legislative changes are anticipated to be available for consultation within the next two months that will impact local government including phase 3 of the resource management reform, emergency management, building act amendment and local government infrastructure funding and financing (development levies).

(f) **Circulates** the report and attached submissions to the community boards for their information.

3. BACKGROUND

3.1. **Submission on Antisocial Road Use Legislation Amendment Bill (attachment i / 250919179110)** – The Antisocial Road Use Legislation Amendment Bill seeks to deter dangerous and disruptive driving behaviours that threaten road and community safety. These behaviours include fleeing from Police, illegal street racing, intimidating convoys, dirt bike gatherings, and excessive noise events such as siren battles. The Bill introduces new offences, strengthens penalties, and expands Police powers to seize vehicles, close areas, and compel driver identification. It also provides for vehicle forfeiture or destruction in serious cases and increases fines for excessive noise. The overarching aim is to enhance enforcement tools and create stronger deterrents to reduce antisocial road use and its associated risks.

The Council submission is supportive of the Bill and its intent to improve road safety and reduce antisocial behaviour by road users. The submission requests that the Select Committee consider options for streamlining the reparations process to lessen the financial burden on ratepayers for repairing damage caused by such behaviour. The submission strongly endorses provisions that grant Police greater powers, including the ability to destroy vehicles belonging to convicted repeat offenders, target convoys and other intimidating behaviour, and issue immediate fines to individuals who fail to leave designated areas. Finally, the submission supports that the Bill's provisions will not impede lawful, legitimate events such as hot rod gatherings, which can deliver economic benefits to communities, including districts like Waimakariri.

3.2. **Submission on the Draft Standard Code of Conduct (attachment ii / 250923181180)** - The Local Government Commission has developed a draft standard Code of Conduct for all councils, aimed at creating a consistent framework for expected behaviours and complaint processes. The draft code emphasises constructive dispute resolution, early intervention, and independent investigation of complaints, including allowing the public to lodge complaints. It seeks to balance natural justice with complainant safety, uphold public accountability while respecting privacy, and ensure responsible use of freedom of expression. The code minimizes the role of Chief Executives in enforcement and focuses on fairness, transparency, and integrity in local governance.

The Council supports the Government's objective to introduce a standardised Code of Conduct for Elected Members, as it will promote consistency and certainty for Elected Members, staff, and the wider community. However, in the submission, the Council caution against a fully prescriptive approach, which could create inequities for smaller councils. The submission endorses the establishment of an independent investigator to strengthen the integrity and impartiality of the complaints process. Clear definitions within the Code are essential to ensure consistent interpretation and application. Finally, the submission highlights that financial implications of increased responsibilities, coupled with the absence of cost recovery mechanisms, must be addressed to safeguard the long-term sustainability of local government operations, particularly for smaller councils.

4. ISSUES AND OPTIONS

4.1. Issues and options in relation to the topic and the subject of each submission were canvassed as part of preparing the submission. Due to timing of the government consultations staff were unable to hold Council workshops on these topics. All Council

submissions are shared with Elected Members in draft form prior to final review and signing by the Mayor and Chief Executive.

4.2. The Council has two options: it may receive the report, or request staff to withdraw any or all of the submissions. During the preparation of each submission staff seek feedback from Council and the Management Team to inform the key submission points. During this process there is the option to not make a submission. None of the submissions referred to in this report received feedback that a Council submission was not appropriate.

Implications for Community Wellbeing

There are implications on community wellbeing by the issues and options that are the subject matter of this report. Council submission to central and regional government consultations are an opportunity to highlight the impact any proposals have on the Council and wider Waimakariri community.

4.3. 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.

It is noted that mana whenua have the opportunity through the same consultation and engagement opportunities to provide their views directly on Central and Regional Government consultation topics.

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.

Consideration of any specific groups or organisations impacted by the proposals being consulted on would be undertaken at the time of preparing workshops and draft submissions for Council feedback.

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.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

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

6.2. Sustainability and Climate Change Impacts

The recommendations in this report do not have sustainability and/or climate change impacts. Consideration of any sustainability and climate change impacts would be undertaken at the time of preparing workshops and draft submissions for Council feedback.

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

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.

7.4. Authorising Delegations

No additional delegations are requested as a result of this report.

Waimakariri District Council
215 High Street
Private Bag 1005
Rangiora 7440, New Zealand
Phone 0800 965 468

Our Reference: EXT-39 / 250919179110

30 September 2025

Committee Secretariat
Justice Committee
Parliament Buildings
Wellington

Email: ju@parliament.govt.nz

Waimakariri District Council submission on the Antisocial Road Use Legislation Amendment Bill

1. Introduction

1.1. The Waimakariri District Council (the Council) thanks the Justice Committee for the opportunity to provide a submission on the Antisocial Road Use Legislation Amendment Bill. We note the Committee is consulting on the Antisocial Road Use Legislation Amendment Bill (the Bill) until 30 September 2025

1.2. The Council supports the Bill and the intention to improve road safety and minimise antisocial behaviour by road users. We request the Select Committee explores options to streamline the reparations process to reduce the burden on ratepayers for repairing damage caused by antisocial road use.

2. Background

2.1. The Waimakariri District is located in the Canterbury Region, north of the Waimakariri River. The district is approximately 225,000 hectares in area and extends from Pegasus Bay in the east to the Puketeraki Ranges in the west. It lies within the takiwā of Ngāi Tūāhuriri one of the primary hapū of Te Rūnanga o Ngāi Tahu. The district shares boundaries with Christchurch City to the south, Selwyn District to the south and west, and Hurunui District to the north.

2.2. The Waimakariri district is geographically diverse, ranging from provincial townships such as Rangiora and Kaiapoi, through to the remote high country farming area of Lees Valley. The district's population increased from 33,000 to 62,800 in the years 1996 - 2020 and is estimated in 2025 to be just over 74,000Eighty percent of the population is located in the east of the district and approximately 60 percent of residents live in the four main urban areas of Rangiora, Kaiapoi, Woodend/Pegasus and Oxford. The remainder live in smaller settlements or the district's rural area, including approximately 6000 on rural-residential or rural 'lifestyle' blocks.

2.3. Geographically, socio-culturally and economically, the Waimakariri district is primarily a peri-urban area. Residents are drawn to and identify with the outdoor lifestyle and recreation opportunities available in our district. However, due to its proximity to

Christchurch City, the district has a significant and growing urban and peri-urban population. Consequently, primary production and construction are the two largest economic sectors in the district.

3. Key Submission Points

More tools to reduce antisocial road use are welcomed

3.1. The Council welcomes additional measures to lessen incidences of antisocial road use. We note that for the objectives of these amendments to be achieved, the Police will need adequate resources to enable enforcement, especially outside of the main centres.

3.2. In the Waimakariri district, antisocial road use tends to occur in the smaller townships or villages and in rural areas characterised by long and straight roads. Issues are most common in the early hours of the morning.

3.3. There has also been an increase in organised incidents, often 'boy racer convoys' since an increase in enforcement in Christchurch, Police have acknowledged that this action may be displacing the activity to Waimakariri. In some instances, these organised illegal meets attract up to 100 vehicles. We note that the response time for Police is increased when the antisocial activity occurs in these smaller rural locations.

3.4. Waimakariri residents have expressed frustration at antisocial road use as described above. Organised gatherings in rural areas make residents feel unsafe and fearful of reprisal if they report incidents. Residents have requested more police presence as well as surveillance along key transport corridors as a deterrent and as a means providing evidence.

Reparations and the burden to ratepayers

3.5. Council is responsible for the provision of roading infrastructure. Doing burnouts, drifting and other antisocial road user behaviour causes damage to our District's roads, and the replacement and repair costs are met by ratepayers.

3.6. We acknowledge that the reparation process is in place which helps recover the cost of damage of roading infrastructure. Council requests the Committee consider options to streamline the reparation process for road controlling authorities to allow for quicker and more efficient recovery, reducing the burden on ratepayers.

3.7. The Council strongly supports the intent of this bill, as it would provide greater power to Police. Council specifically supports the ability to destroy the vehicles of convicted repeat offenders, the ability to target 'convoys and other intimidating behaviour, and the immediate fine being able to be issued to those who fail to leave an area.

3.8. Council notes and supports that the provisions of the Bill will not impede legal, legitimate events by hot rodders or similar groups. These events can be economically beneficial to an area such as the Waimakariri district.

4. Summary of Position and Recommendations

4.1. The Council supports this Bill and appreciates the additional tools being given to the Police and Courts to lessen the incidence of antisocial road use.

4.2. Our contact for service and questions is Dianna Caird, Senior Policy Analyst, Strategy and Business Unit dianna.caird@wmk.govt.nz .

4.3. The Council would like to speak in support of its submission.

Yours faithfully

Dan Gordon
Mayor
Waimakariri District Council

Kelly La Valley
Acting Chief Executive
Waimakariri District Council

Waimakariri District Council
215 High Street
Private Bag 1005
Rangiora 7440, New Zealand
Phone 0800 965 468

Our Reference: EXT-39 / 250923181180

3 October 2025

The Local Government Commission

Email: lgc@lgc.govt.nz

Waimakariri District Council submission on the Draft Standard Code of Conduct

1. Introduction

1.1. The Waimakariri District Council (the "Council") thanks the Commission for the opportunity to provide a submission on the proposed Draft Standard Code of Conduct.

1.2. We note the Commission is consulting on the Draft Standard Code of Conduct (the "Code of Conduct") until 26 September 2025.

1.3. The Council is generally supportive of the Government's objective to deliver a standardised code of conduct for Elected Members, providing consistency and certainty to Elected Members, as well as to staff and the wider community. We caution against a fully prescriptive code of conduct as this may raise inequities amongst smaller councils. We hold some concerns around certain aspects of the Code of Conduct and these are discussed in more detail below.

2. Background

2.1. Waimakariri District is located in the Canterbury Region, north of the Waimakariri River. The District is approximately 225,000 hectares in area and extends from Pegasus Bay in the east to the Puketeraki Ranges in the west. It lies within the takiwā of Ngāi Tūāhuriri one of the primary hapū of Te Rūnanga o Ngāi Tahu. The District shares boundaries with Christchurch City to the south, Selwyn District to the south and west, and Hurunui District to the north.

2.2. The Waimakariri District is geographically diverse, ranging from provincial townships such as Rangiora and Kaiapoi, through to the remote high country farming area of Lees Valley. Eighty percent of the population is located in the east of the district and approximately 60 percent of residents live in the four main urban areas of Rangiora, Kaiapoi, Woodend/Pegasus and Oxford. The remainder live in smaller settlements or the district's rural area, including approximately 6000 on rural-residential or rural 'lifestyle' blocks.

2.3. Geographically, socio-culturally and economically, the Waimakariri District is primarily a peri-urban area. Residents are drawn to and identify with the outdoor lifestyle and recreation opportunities available in our district. However, due to its proximity to Christchurch City, the district has a significant and growing urban and peri-urban population. Consequently, primary production and construction are the two largest economic sectors in the district.

3. Key Submission Points

Support for Independent Oversight of the Complaints Process

3.1. The Council supports the establishment of an independent investigator to oversee the complaints handling process. The current framework in which complaints are both investigated and determined internally presents risks of perceived procedural impropriety and bias. During their tenure as Chief Executive, relationships are formed with Elected Members and this can create a perceived sense of predetermination, bias or favouritism. It also places the Chief Executive in a conflicted position, requiring them to make determinations regarding Elected Member who are, in effect, their employer. This arrangement has potential to strain professional relationships and undermine confidence in the process.

Recommendations to Minimise Exploitation of the Complaints System

3.2. The expansion of complaints to members of the public is not supported, some concerns are highlighted below:

3.2.1. There is potential to misuse the proposed complaints process. Nationally, public trust in Government is low and this has resulted in more public interest and scrutiny of decisions made. This is evidenced by a notable increase in both the volume and complexity of Local Government Official Information Act ("LGOIMA") requests received by many councils. We have seen a rise in behaviours and communications from members of the public who wish to cause disruption or monopolise resources through LGOIMA requests.

3.2.2. While the majority of requests are legitimate, there remains a proportion of requests that are potentially vexatious or politically motivated. At present, the Council manages these requests using internal resources, incurring internal costs. Introducing a process whereby all complaints from members of the public, staff or Elected Members are required to undergo external review in the first instance could result in significant costs to ratepayers, particularly if external consultants are engaged to triage and assess requests that may ultimately lack merit.

3.2.3. To ensure the integrity and efficiency of the complaints process we recommend the following measures be considered:

- Require complainants to provide their full legal name and contact details with their complaint
- Establish a mechanism allowing councils to return complaints that lack sufficient information or appear prima facie to be without merit, with the option for resubmission
- Providing the council with a mechanism to resolve minor or easily resolved complaints internally
- Enable Councils to review or triage complaints before they are sent to an external party
- Introduce a mechanism for councils to manage the costs associated with the complaint review. This is particularly relevant in instances where special interest or protest groups may seek to disrupt council operations or financial stability through a high volume of politically motivated complaints.

Recommended Definitions and Clarifications

3.3. To support consistent interpretation and application of the Code of Conduct we recommend the following definitions be included or expanded on:

3.3.1. Investigator: To provide certainty and standardisation of the outcomes of investigations, the investigator must be a suitably experienced or qualified person. It may be appropriate that they hold a professional membership, such as with the Arbitrators and Mediators Institute of New Zealand or hold a current legal practicing certificate.

3.3.2. Personal Capacity: Clause 18 refers to Elected Members acting in their personal capacity. A definition of what would be considered personal capacity would clarify the use and extent of this clause. If the intention is that this Code of Conduct extends past Elected Members professional actions, this should be either defined or examples provided.

Financial Implications of Increased Responsibilities

3.4. Central government has increasingly assigned more responsibilities to councils. These additional responsibilities have created financial implications on ensuring delivery of cost-efficient local government services. In many cases, legal restrictions prevent councils from recovering costs, and in others, central government has not provided funding options despite the national benefits involved resulting in a growing number of unfunded mandates.

3.5. Within the proposed Code of Conduct there appears to be no cost recovery available, no additional funding and the potential for vexatious or politically motivated complaints add to external consultant and legal costs. For smaller Council's, this cost could rise to levels which are no longer affordable and put further pressure on rates.

General Comments

3.6. The period for feedback on the Code of Conduct has coincided with the Local Government election period. The Council recommends that future consultation timelines for Local Government matters be scheduled to avoid this overlap. This ensures Elected Members have adequate time to fully engage in and participate meaningfully in the submission process.

3.7. The Council would welcome the opportunity to provide feedback on the work undertaken by the Department of Internal Affairs involving the range of penalties, sanctions and offences related to the Code of Conduct in due course.

4. Summary of Position and Recommendations

4.1. The Council supports the establishment of an independent investigator to enhance the integrity and impartiality of the complaints process. Clarification of key definitions within the Code of Conduct is essential to ensure consistent interpretation and application. Finally, the financial implications of increased responsibilities and the absence of cost recovery mechanisms must be addressed to ensure the long-term sustainability of local government operations, particularly for smaller councils.

Our contact for service and questions is Katherine Brocas, katherine.brocas@wmk.govt.nz.

Yours faithfully

Dan Gordon
Mayor
Waimakariri District Council

Jeff Millward
Chief Executive
Waimakariri District Council

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR DECISION

FILE NO and TRIM NO:	POL-01-02/250814150730
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Dianna Caird, Senior Policy Analyst
SUBJECT:	Adoption of Community Board Submissions on Resource Management Matters Policy

ENDORSED BY:
(for Reports to Council, Committees or Boards)

General Manager | pp Chief Executive

1. SUMMARY

1.1. The purpose of this report is to seek Council approval to adopt the *Community Board Submissions on Resource Management Matters Policy* (the Policy).

1.2. The Community Board Submission Policy for Resource Management Matters (the Policy) establishes a fair and comprehensive process for Community Boards (Boards) when submitting on resource management matters. The Policy will provide guidance on:

- the types of consultation covered by the Policy.
- the advice Boards may seek under the Policy.
- when to engage advice for submission preparation.
- managing unallocated funds.
- criteria for releasing funds to Boards.

Attachments:

i. Community Board Submissions on Resource Management Matters Policy (250505077266).

2. RECOMMENDATION

THAT the Council:

(a) **Receives** Report No. 250814150730.

(b) **Adopts** the Community Board Submissions on Resource Management Matters Policy.

(c) **Notes** the Policy is intended to provide a clear and transparent process for Community Boards to access the funds provided by the Council when submitting on Resource Management matters.

(d) **Notes** the draft Policy was presented at an All-Boards workshop 23 July 2025.

(e) **Notes** that if a Community Board chooses to pursue further action after a consent hearing, it must submit a more detailed application

(f) **Notes** the Policy will be reviewed in 1 year to assess the effectiveness of the Policy.

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

3. BACKGROUND

3.1. Community Boards (the Boards) have, on occasion, sought expert advice to support their submissions on Resource Management Act (RMA) matters. While this advice has generally aligned with the technical evidence already provided by Council experts, it has resulted in additional costs that were not anticipated in the Council's budget. To ensure long-term financial sustainability and responsible use of ratepayer funding, the Council is reviewing how such support can be managed more effectively.

3.2. The Council acknowledges the vital role the Boards play in local government as the voice of their communities. The Boards can engage at a level the Council cannot easily replicate. Their advice to consent hearings panels should accurately reflect community views, including potential impacts on local lifestyles.

3.3. At the Council's Annual Plan 2025/2026 Budget Meeting on 28 January 2025, a budget of $40,000 was allocated for planning assistance to support the Boards. This allocation was confirmed in the Annual Plan adopted on 17 June 2025. The Council also requested a policy to establish a process for distributing these funds and to guide the Boards in selecting suppliers.

3.4. This Policy has been developed to align with Section 52 of the Local Government Act, which sets out the role of community boards in local government. The Policy also references Schedule 7, Part 2, Section 39(2) of the Loval Government Act 2002, which states that a territorial authority may fix a limit within which expenditure may be incurred by a community board.

4. ISSUES AND OPTIONS

Policy Development and Summary

4.1. The funds associated with the Policy are determined through Annual Plan and Long Term Plan budget decisions. For the 2025/2026 Annual Plan, $40,000 has been allocated. Unused funds may be carried over to future years, subject to Council approval under standard carryover processes. The process for the Boards to access carried-over funds remains unchanged.

4.2. Community Boards can apply to access the funds to gain assistance to submit on a publicly notified consent under the RMA, that is in the Boards ward. Applications will also be considered for Environment Canterbury Plan Changes and private plan changes to the Waimakariri District Plan. The Policy and funding pool does not apply to consultations regarding changes to the Waimakariri District Plan.

4.3. The Policy advises the Boards to engage with planning professionals that can recommend the best way to structure their submission. This will enable the Boards knowledge of the way of life, and potential impacts on that to be recognised by the hearings panel.

4.4. The process to implement the Policy will require the Board Chair to send an application to Governance for forwarding to the Level 2 General Manager assigned to each Board, or their delegate. Following receipt of the application, the allocated General Manager will consult with the Board Advocate, management team and the Chief Executive to ensure consistency with the Policy and procurement processes.

4.5. The Audit and Risk Committee will receive reports every six months on activities related to the fund. Community Boards must report back to the Committee on how the funds were used, the value for money achieved, and the outcome of their submission.

Community Board engagement on the Draft Policy

4.6. The draft Policy was presented at an All-Boards workshop in July 2025, where valuable feedback was received. Following this discussion, Council staff added an exemptions clause. Staff also highlighted that under the RMA, certain consent applications must be granted when rules provide no grounds for refusal.

4.7. The All-Boards workshop highlighted the differing levels of evidence required by the Environment Court compared to consent hearings panels. If a Community Board chooses to pursue further action after a consent hearing, it must submit a more detailed application, as such action could pose significant risk to the Council.

4.8. Staff recommend of the adoption of the Policy to support the funds agreed in the Annual Plan 2025/2026. The Council can choose not to adopt the Policy, this is not recommended as the introduction of this new fund requires a clear understanding of the intent and requirements to manage the fund.

Implications for Community Wellbeing

4.9. There are implications for community wellbeing in this report, as the Policy enables Community Boards to submit effectively on resource management matters that may impact the wellbeing of the community.

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

5. COMMUNITY VIEWS

Mana whenua

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

Groups and Organisations

5.2. There are no groups and organisations likely to be affected by, or to have an interest in the subject matter of this report. Groups and organisations are likely to want to know that their Community Board(s) can represent the local experience and knowledge.

Wider Community

5.3. The wider community is not likely to be affected by, or to have an interest in the subject matter of this report. The wider community will still be able to submit on notified RMA consent applications in the same manner as they do now.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

Financial Implications

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

6.2. This budget is included in the Annual Plan 2025/2026. $40,000 has been allocated to support Community Board submissions on resource management matters.

Sustainability and Climate Change Impacts

6.3. The recommendations in this report do not have sustainability and/or climate change impacts.

Risk Management

6.4. There are not risks arising from the adoption/implementation of the recommendations in this report. The Policy will reduce financial risks by allocating a specific budget and providing guidance for allocation. The Policy will be reviewed after 1 year, which will further reduce risk as the efficacy of the Policy will be assessed. Any required updates to the Policy could be recommended to Community Boards and the Council.

Health and Safety

6.5. There are not health and safety risks arising from the adoption/implementation of the recommendations in this report.

7. CONTEXT

Consistency with Policy

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

Authorising Legislation

7.2. Local Government Act 2002

Consistency with Community Outcomes

7.3. The Council's community outcomes are relevant to the actions arising from recommendations in this report. The following community outcome has been identified:

7.4. Environmental - The natural and built environment in which people live is clean, healthy and safe.

Authorising Delegations

7.5. The Council has the authority to make decisions on this matter. The Council has delegated decisions on the allocation of funds to the Management Team Operations. Financial oversight will be provided by the Audit and Risk Committee.

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Community Board Submission Policy for Resource Management Matters

1. Policy Context

1.1. The Waimakariri District Council (the Council) has four Community Boards (the Boards). The primary purpose of community boards is to ensure that the voices of communities are heard and considered in local government decisions.

1.2. There are many resource consent applications that are lodged with the Waimakariri District Council and Environment Canterbury each year, and only a handful of these will be publicly notified. The regulatory teams within each respective consenting authority have a responsibility to consider the effects of these proposals on the environment and ensure that sustainable management of natural and physical resources is achieved. It is therefore an unusual situation where a Board will find itself in a position where a submission is warranted.

1.3. If a proposed activity that has been notified through the RMA process and is seen by a Board as being a significant risk to the environment, the Board may consider a submission. The submission would contain unique direct knowledge that relates to the activity or area that only the Board can provide.

1.4. If a submission is warranted, Council is encouraging the Boards to focus on their strength – the ability to provide community views about the area, and the potential impacts the proposal would have on this. This information and experience is best captured by those that have direct knowledge of an area.

1.5. This policy has been developed to enable Boards to seek technical planning advice on submission preparation. For complex cases, this technical advice on submission preparation may be helpful to the board. It is not a requirement that Boards procure this advice to submit on a notified consent application.

1.6. This policy is made with reference to the following sections of the Local Government Act 2002. Section 52 (Role of community boards) and Schedule 7, Part 2, Section 39(2), which state that a territorial authority may fix a limit within which expenditure may be incurred by a community board.

2. Funding source and carrying over unused funds

2.1. The Council has committed to funding a pool of funds to assist Community Boards in preparing submissions on RMA matters each year[1]. The amount in the pool is dependent on council budget decisions. These funds are to be used for planning support to aid the Community Boards in submission preparation. Unused funds may be carried over for future use, subject to Council approval within the standard Council carryover processes. The unused funds carried over will be available for boards to access using the same processes as standard funds.

[1] Council Minutes – 25/26 AP Budget Meeting TRIM 250124011188

2.2. The Council requested that a policy be developed to guide the Boards in submitting on RMA matters.

3. Policy Objectives

3.1. The Community Board Submission Policy for Resource Management Act Matters (the Policy) establishes a fair and comprehensive process for the Boards when submitting on RMA matters. The Policy will provide guidance on:

- when Community Boards should look to engage advice for submission preparation.
- the consultation types this policy applies to.
- the type of advice Community Boards can engage under this Policy.
- the criteria used to determine if funds should be released to Community Boards.

4. Policy Statement

Consultations this policy applies to

4.1. The Policy applies to publicly notified applications for a consent under the RMA, in the Boards ward and Environment Canterbury Plan Changes.

4.2. This policy and funding pool does not apply to consultation regarding changes to the Waimakariri District Plan; however, it may be applied to new, private plan changes.

4.3. If the consent application is declined and the applicant appeals the Board cannot use funds to oppose or support the appeals process unless funding is granted under the exemptions clauses below.

Ensuring Funding for advice distributed equitably

4.4. The funds are available for all Boards to access, subject to Long Term and Annual Plan decisions. The release of funds will be subject to Council's standard procurement processes.

4.5. The Governance Team will guide the Boards in their request for funding. Each board can apply for a maximum of $10,000 per RMA consent application. If a Board wishes to request additional funding the exemptions policy must be followed. Boards may each contribute a smaller amount to a collective submission regarding matters the boards believe is important at a district level.

4.6. The Board Chair will send the application to Governance for forwarding to the Level 2 General Manager assigned to each Board, or their delegate. Following receipt of the application, the allocated General Manager will consult with the Board Advocate, management team and the CE to ensure consistency with the Policy and procurement processes

4.7. Information to be supplied to Governance for the release of funds:

4.7.1. Name and Company name of resource management professional selected

4.7.2. Value of contract/amount being applied for.

4.7.3. Type of advice being procured.

4.7.4. Consent application number

4.7.5. If the submission is a joint submission with other Community Boards.

4.7.6. A brief outline of the information the board will be providing to the consenting authority

4.8. Reasons for refusal to release funding:

4.8.1. The Board is procuring legal or technical advice that would duplicate the work of the council.

4.8.2. There are no remaining funds available.

4.8.3. There are competing requests (in this situation, a joint application from two or more boards may be considered).

4.8.4. There are concerns regarding the value for money from the contractor.

4.8.5. There are any other matters leading to risks to the Council.

Types of advice that Boards can procure

4.9. The Council considers that the following advice is appropriate to procure:

- Facilitation assistance to the community board to develop points to be made within a submission.
- Assistance in drafting and lodging submission to the relevant statutory bodies.
- Assistance for social impact assessments.
- Assistance and guidance in the decision-making process from submission through to the Council hearing (if one is held).

4.10. Advice procured under this policy should be from a suitably qualified and experienced resource management professional who is familiar with the relevant statutory process.

4.11. The funds must not be used to procure legal advice or other technical advice unless an exemption is made.

Guidance for procuring advice

4.12. It is recommended that Boards obtain quotes from more than one provider before committing to the expenditure.

Exemptions

4.13. There may be circumstances from time to time where Boards see value in a greater level of detail to their submission, or more involvement in a particular issue. To enable this a Board may request an exemption to allow access to additional funding from the funding pool.

4.14. If a Board wishes to request funding for a legal professional during the preparation of a submission to a consent hearing they must request this in writing through the existing process. The request must state why legal advice is required and why the information cannot be provided by a planning professional.

4.15. If a board wishes to continue their involvement in a planning decision further than the consents hearing the following process must be followed:

4.15.1. A formal report must be submitted to the Council to request additional funding.

4.15.2. The report must contain the following information:

4.15.2.1. The reasons for the Board wishing to continue involvement with the issue.

4.15.2.2. The advice the Board wishes to procure.

4.15.2.3. A formal quote from the advisor the Board wishes to use.

4.15.2.4. The Boards report must show that the Board understands:

- the requirements for information to be presented during the appeals process

- understands the costs required to lodge an appeal; and,
- the possibility of having costs awarded against them as the appellant.

Audit

4.16. Activities will be reported to the Audit and Risk Committee on a six-monthly basis.

5. Links to legislation, other policies and guidance

- Local Government Act 2002
- Resource Management Act 1991

6. Questions

6.1. Any questions regarding this policy should be directed to the General Manager, Finance and Business Support

7. Effective date

2 December 2025

8. Review date

2 December 2031

9. Policy owned by

Manager, Governance

10. Approval

Adopted by Waimakariri District Council on 2 December 2025.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR DECISION

FILE NO and TRIM NO:	Gov-01-11/251121221669r
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Sarah Nichols, Governance Manager
SUBJECT:	Adoption of Elected Member Expenses Policy
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / pp Chief Executive

1. SUMMARY

1.1. This report advises of an update to the Elected Member Expenses Policy to 30 June 2026, as required by the Remuneration Authority (the Authority), and seeks approval of the Council.

1.2. The Elected Member Expenses Policy to 30 June 2026 was adopted by the previous Council on 5 August 2025, with minor amendments in line with the 1 July Authority Determination.

1.3. There has been one key change in a recent Determination issued by the Authority since the policy was last adopted. This is the provision of a Home Security allowance for elected members. The allowance is subject to maximums of $4,500 for purchasing and installing a system, and $1,000 for monitoring. Appropriate threat and risk assessment is required for a member to be eligible, and the member must reside within the district.

1.4. This allowance has now been reflected in the proposed updated policy which this report is seeking approval of.

Attachments

i. Proposed updated Elected Member Expenses Policy to 30 June 2026.(251121221672).

2. RECOMMENDATION

THAT the Council:

(a) **Receives** Report No. 251121221669.

(b) **Approves** the Elected Member Expenses Policy to 30 June 2026 (Trim 25112121221672).

(c) **Notes** a copy of the updated adopted Policy is sent to the Remuneration Authority.

(d) **Circulates** a copy of this report and the approved Expenses Policy to all Community Boards for their reference.

3. BACKGROUND

3.1. The Local Government Act 2002 gives the Remuneration Authority (the Authority) the responsibility for setting remuneration, approving expense rules and setting the mileage allowance for elected members. The Authority independently set the remuneration, allowances and expenses for elected members by making Determinations. Determinations normally cover a financial year to 30 June. The Authority Determination is a legislative instrument that the Council is required to follow.

3.2. The Council has an Elected Member Expenses policy to provide guidance on Elected Member Expenses and entitlements. Contents of the policy are directly influenced by changes in the Determination.

4. ISSUES AND OPTIONS

4.1. The Elected Members Expenses Policy is required to be reviewed by the Council when amendments are required, with a copy being sent to the Authority for reference. The Community Board members are also bound by the Policy.

4.2. Post-election the Authority introduced a new home security system allowance, as it recognised the increasing threatening behaviour the public officials and elected members are experiencing. This reimbursement allowance is similar to members of Parliament. The Authority has clarified that the maximum allowance for total cost purchase and installation is $4,500. This is applicable for the term and the approval is subject to a security risk assessment being undertaken by the Council's independent security advisor and approval of the Chief Executive. Any additional expenses arising from the provision of supplementary security measures requires an application and approval of the Remuneration Authority.

4.3. This policy applies to all elected members of the Council whose primary place of residence is within the Council's jurisdiction. It does not apply to elected members that live outside of the Waimakariri District.

4.4. Reimbursement is subject to the following conditions:

a) A security threat and risk assessment must be conducted by the Council's independent security advisor.

b) The assessment must be authorised by the Chief Executive, based on a written request from the elected member, that outlines the issues and potential risk/threats and evidence of such occurrences. (i.e. public actions resulting in Police call-outs, trespass notices served, repeated threats)

c) The Chief Executive must agree with the findings of the assessment and approve any reimbursement.

4.5. Furthermore, an elected member may be reimbursed up to $1,000 per annum for monitoring, security call-outs and repairs to security equipment. This is subject to acknowledgement of risk assessment that security measures required are related to elected member role and Chief Executive approval.

4.6. All security related reimbursement values include GST.

Implications for Community Wellbeing

There are not implications on community wellbeing by the issues and options that are the subject matter of this report.

4.7. 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.

5.2. Groups and Organisations

There are not groups and organisations likely to be affected by, or to have an interest in the subject matter of this report.

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.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

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

This budget is included in the Annual Plan/Long Term Plan, under the Governance area.

6.2. Sustainability and Climate Change Impacts

The recommendations in this report do not have sustainability and/or climate change impacts.

6.3 Risk Management

There are not risks arising from the adoption/implementation of the recommendations in this report.

6.3 Health and Safety

There are not 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

Local Government Elected Members (2025/2026) Determination 2025

7.3. Consistency with Community Outcomes

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

7.4. Authorising Delegations

The Council has the authority to adopt the Policy.

Waimakariri District Council
215 High Street
Private Bag 1005
Rangiora 7440, New Zealand
Phone 0800 965 468

Elected Member Expenses Policy

(from 2 December 2025 to 30 June 2026)

1. Introduction

The Local Government Act 2002 provides for the NZ Remuneration Authority to set remuneration expense rules and mileage allowances for elected members.

2. Policy context

2.1. Policy principles

2.1.1. This policy covers the entitlement of elected members to allowances and contributions towards expenses related to:

travel	mileage	travel
communication	security	childcare
conference and training attendance		professional development.

2.1.2. Elected members should be reimbursed for actual and reasonable expenses they incur in carrying out their official duties.

2.1.3. Reimbursement of expenses apply only to elected members personally and only while they are acting in their official capacity as elected members.

2.1.4. Elected members' expense expenditure must have a justifiable business purpose, is moderate and conservative having regard to the circumstances, is made transparently and is appropriate in all respects.

2.2. Legislative context

Local Government Act 2002 Schedule 7 Clauses 6–13.

Local Government Elected Members (2025/26) Determination 2025.

3. Policy objective

3.1. To establish guidelines on the claiming of expenses, fees and allowances by elected members.

3.1.1. This policy is based on the principles that all expenditure is:

- Actual and reasonable
- Related to conduct of local authority business
- Represents the best use of ratepayer funds.

3.1.2. All entitlements are considered to be a contribution to expenses elected members may incur in the course of conducting local authority business.

3.1.3. All dollar figures in this policy are GST inclusive.

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4. Implementation

4.1. All expense claims must be submitted on the relevant claim form and where appropriate accompanied by full receipts. Eligibility of claims presented without receipts will be determined by the Governance Manager.

4.2. All expense claims are to be returned at least quarterly, and preferably monthly.

4.3. Expense claims by the Mayor are to be approved by the Chair of Audit & Risk Committee and the Chief Executive.

4.4. Expense claims by Deputy Mayor, Councillors and Community Board members are approved by the Governance Manager.

4.5. All mileage claims, including Mayor, are approved by the Governance Manager.

4.6. The internal audit work programme will include sampling of expense claims and allowances paid to elected members and staff. An external audit work programme may be undertaken as required.

5. Policy Statement

5.1. Remuneration, allowances and hearing fees

5.1.1. Under the Local Government Elected Members Determination 2025 a member of a local authority or a Board is entitled to:

(a) the applicable remuneration set out in the Schedule (adjusted in accordance with clause 8 if applicable)

(b) the applicable allowances payable in accordance with clauses 11 to 15

(c) the applicable hearing fees payable in accordance with clause 16.

5.1.2. If a member of a territorial authority is also elected or appointed to a board, the member is entitled only to the remuneration that is payable to the member as a member of the territorial authority (i.e. a Councillor appointed to a Community Board is not paid additional remuneration).

5.2. Acting Mayor

5.2.1. This clause applies to a member who acts as a mayor during a period when, because of a vacancy or temporary absence, the remuneration or allowances that would usually be paid to the mayor are not being paid.

5.2.2. While acting as mayor, the member must be paid the remuneration and allowances usually payable to the mayor, instead of the member's usual remuneration, allowances, and hearing fees.

5.3. Resource Management Act (RMA) resource consent hearing costs

5.3.1. Where an elected member (Councillor or Community Board member*) is appointed to an RMA Resource Consent Application Hearing Panel or District Plan Hearing Panel by the Council, remuneration and allowances are payable as outlined in the Local Government Members (2025/26) Determination 2025, Section 16 (or subsequent Determinations).

- Chairperson of an RMA Resource Consent hearing is entitled to be paid a fee of up to $130 per hour of RMA hearing time related to the hearing, including preparation, reading materials, site visit and writing of decision time
- Panel member that is not Chairperson of RMA Resource Consent or District Plan

hearing is entitled to be paid a fee of up to $104 per hour of RMA or District Plan hearing time related to the hearing, including preparation, reading materials, site visit and writing of decision time

- For any period of hearing time that is less than one hour, the fee must be apportioned accordingly
- RMA Resource Consent or District Plan hearing fees are not payable to mayors or a member who acts as mayor and is paid the mayor's remuneration and allowances under clause 16(4).

5.3.2. Any elected member Waimakariri District Council appoints to a RMA Resource Management hearing or District Plan hearing must ~~be suitably qualified by~~ hold a valid accreditation. The required accreditation is the "Making Good Decisions" programme endorsed by the Ministry for the Environment and provided by WSP Technical. The accreditation must be re-validated after three years from initial accreditation and every five years after that. ~~on behalf of the Ministry for the Environment having successfully completed the "Making Good Decisions" programme~~. [tidied wording slightly]

5.4. District Licensing Committee hearing costs

5.4.1. Where an elected member (Councillor or Community Board member*) is appointed to the District Licensing Committee (DLC) remuneration is set under Section 183 of the Sale and Supply of Alcohol Act 2012 and their fees and expenses are payable as prescribed by the Minister of Justice in accordance with the Cabinet fees framework. This currently being:

- Chairperson of a DLC hearing is entitled to be paid a fee of up to $130 per hour of DLC hearing time, including preparation, site visit and writing of decision time
- Panel member whom is not Chairperson of DLC hearing is entitled to be paid a fee of up to $104 per hour of DLC hearing time, including preparation and site visit time
- For any period of hearing time that is less than one hour, the fee must be apportioned accordingly
- DLC hearing fees are not payable to mayors or a member who acts as mayor and is paid the mayor's remuneration and allowances.

5.5. Reimbursement of conference costs

5.5.1. Where an elected member attends a conference approved by the Council or a Community Board, all actual and reasonable costs associated with the conference or seminar will be met by the Council. This includes meal costs, accommodation costs and travel costs. Alcohol costs will not be reimbursed. The most cost-effective means of travel must be used. Claims are to be supported by receipts and submitted to the Governance Manager within one month of conference.

5.6. Accommodation and meals

5.6.1. Accommodation and meals will be reimbursed based on actual and reasonable costs, as determined by the Governance Manager. In respect of the Mayor, assessment of actual and reasonable costs shall be determined by the Chair of the Audit and Risk Committee together with the Chief Executive. ~~Where private accommodation is used a reimbursement claim of $50 per night can be made~~. [remove as no longer covered in Rem.Authority Determination] Meals will be reimbursed based on actual and reasonable costs. Claims are to be supported by receipts. Alcohol is considered a private expense and is not reimbursed.

5.7. Mayoral vehicle

5.7.1. The Waimakariri District Council will supply and service a motor vehicle for the Mayor, including for private use. This will be one vehicle per election term in accordance with the Determination.

5.8. Vehicle mileage allowance

5.8.1. Mileage will be paid in accordance with Remuneration Authority Determination (2025/26).

5.8.2. A local authority may pay to a member a vehicle mileage allowance to reimburse that member for costs incurred in respect of eligible travel.

5.8.3. A member's travel is eligible for the allowance if—

(a) it occurs on a day when the member is not provided with a motor vehicle by the local authority; and

(b) the member is travelling—

(i) in a private vehicle; and

(ii) on local authority business; and

(iii) by the most direct route that is reasonable in the circumstances.

5.8.4. The allowance payable to a member for eligible travel is, —

(a) for a petrol vehicle, -

(i) $1.17 per kilometre for the first 14,000 kilometres of eligible travel in the determination term; and

(ii) 37 cents per kilometre after the first 14,000 kilometres of eligible travel in the determination term:

(b) for a diesel vehicle, -

(i) $1.26 per kilometre for the first 14,000 kilometres of eligible travel in the determination term; and

(ii) 35 cents per kilometre after the first 14,000 kilometres of eligible travel in the determination term:

(c) for a petrol hybrid vehicle, -

(i) 86 cents per kilometre for the first 14,000 kilometres of eligible travel in the determination term; and

(ii) 21 cents per kilometre after the first 14,000 kilometres of eligible travel in the determination term:

(d) for an electric vehicle, -

(i) $1.08 per kilometre for the first 14,000 kilometres of eligible travel in the determination term; and

(ii) 19 cents per kilometre after the first 14,000 kilometres of eligible travel in the determination term.

5.8.5. In the case of an elected member living outside the Waimakariri District, the mileage allowance will be payable only from their point of entry at the Waimakariri District boundary.

5.8.6. Transport costs other than mileage will be paid for on an actual and reasonable basis.

5.8.7. The Governance Manager will be responsible for monitoring mileage claims and agreeing with the elected member the most direct route reasonable in the circumstances.

5.9. Travel time allowance

5.9.1. A local authority may pay a member (other than a mayor or a regional chairperson) an allowance for eligible travel time.

5.9.2. A member's travel time is eligible for the allowance if it is time spent travelling within New Zealand—

(a) on local authority business; and
(b) by the quickest form of transport that is reasonable in the circumstances; and
(c) by the most direct route that is reasonable in the circumstances.

5.9.3. The travel time allowance is $41.30 for each hour of eligible travel time after the first hour of eligible travel time travelled in a day.

5.9.4. However, if a member of a local authority resides outside the local authority area and travels to the local authority area on local authority business, the member is only eligible for a travel time allowance in respect of eligible travel time —

(a) after the member crosses the boundary of the local authority area; and
(b) after the first hour of eligible travel within the local authority area.

5.9.5. The maximum total amount of travel time allowance that a member may be paid for eligible travel in a 24-hour period is 8 hours.

5.10. Computer, internet and associated consumables expenses (communications allowance)

5.10.1. It is determined by the local authority that Mayor and Councillors are provided laptops to enable them to perform their functions. Community Board Chairpersons are provided a laptop by Council for Community Board business use. Community Board members are required to use their own equipment.

5.10.2. The Mayor is provided with a mobile phone by the local authority. All Councillors use their own mobile phones. Waimakariri District Council will pay an allowance in accordance with the Remuneration Authority Determination.

Equipment

Mobile telephone	$200 p.a. (excludes Mayor)
Printer	$50 p.a.
Personal computer/tablet/laptop	$400 p.a.
(Community Board Members only – excluding Chairpersons, Councillors and Mayor)	
Paper consumables	$200 p.a.

Services

Internet Connection	$800 p.a.

Equipment

To reimburse for the costs of their phone/printer/computers and related consumables, as follows:

- The Mayor to receive an allowance of $9.61 per fortnight.
- The Councillors to receive an allowance of $17.30 per fortnight.
- Community Board Chairpersons to receive an allowance of $17.30 per fortnight.
- Community Board members to receive $32.70 per fortnight.

Services

To reimburse for the costs of an Internet connection to their residential address to provide computer access to the Council, as follows:

- The Mayor and Councillors to receive an allowance of $30.76 per fortnight
- Community Board Chairpersons to receive an allowance of $30.76 per fortnight
- Community Board members to receive an allowance of $30.76 per fortnight.

If a local authority requests a member to use the member's own mobile telephone service for the purpose of the member's work on local authority business, the member is entitled, at the member's option to –

(a) An allowance for that use of up to $500 for the determination term; or
(b) Reimburse of actual costs of telephone calls made on local authority business on production of the relevant telephone records and receipts.

5.11. Childcare allowance

5.11.1. A local authority may pay a childcare allowance, in accordance with clauses 15 of the Determination, to an eligible member as a contribution towards expenses incurred by the member for childcare provided while the member is engaged on local authority business.

5.11.2. A member is eligible to be paid a childcare allowance in respect of childcare provided for a child only if:

(a) the member is a parent or guardian of the child, or is a person who usually has responsibility for the day-to-day care of the child (other than on a temporary basis); and

(b) the child is aged under 14 years of age; and

(c) the childcare is provided by a person who—

(i) is not a parent of the child or a spouse, civil union partner, or de facto partner of the member; and

(ii) does not ordinarily reside with the member; and

(d) the member provides evidence satisfactory to the local authority of the amount paid for childcare.

5.11.3. A local authority must not pay childcare allowances to a member that total more than $7,500 per child during the determination term.

5.12. Home Security Additions NEW

5.12.1. The Council may reimburse elected members for the installation and ongoing costs of a home security system, subject to the conditions outlined in Clause 15 of the Remuneration Authority's Determination, and conditions set in this policy.

5.12.2. This home security reimbursements applies to all elected members of the Council whose primary place of residence is within the Council's jurisdiction. It does not apply to elected members that live outside of the Waimakariri District.

5.12.3. The Council may reimburse elected members for the installation and ongoing costs of a home security system, subject to the conditions outlined in Clause 15 of the Remuneration Authority's Determination and the procedures set out in this policy.

5.12.4. Reimbursement is subject to the following conditions:

a) A security threat and risk assessment must be conducted by the Council's

independent security advisor.

b) The assessment must be authorised by the Chief Executive, based on a written request from the elected member, that outlines the issues and potential risk/threats. and evidence of such occurrences (i.e. public actions resulting in Police call-outs, trespass notices served, repeated threats).

c) The Chief Executive must agree with the findings of the assessment and approve any reimbursement.

5.12.5. Subject to the above conditions and the Remuneration Authority Determination limits, the Council may reimburse:

a) Up to $4,500 for the installation of a security system at the elected member's primary residence.

b) Up to $1,000 per annum for monitoring, call-outs, and repairs.

5.12.6. Additional expenses for supplementary security measures may be reimbursed if:

a) The security threat and risk assessment recommends such measures; and

b) The Council applies to the Remuneration Authority and receives approval for reimbursement of these additional expenses

5.12.7. The Governance Manager will coordinate requests and assessments, and maintain records of approvals and reimbursements. All reimbursements must be supported by appropriate documentation and receipts.

6. Breaches

An alleged breach of allowance and expense rules is to be considered under the Code of Conduct.

7. Effective date

2 December 2025

8. Review date

This policy will be reviewed annually following the release of the Remuneration Authorities Local Government Elected Members Determination. The next review is due July 2026.

9. Policy owned by

The Governance Manager.

10. Approval

Approved by Waimakariri District Council on 2 December 2025 for receipt by the Remuneration Authority

Appendix 1

Approved Events Eligible for Mileage Claim	Mileage	
	Paid	Not Paid
Council meetings (ordinary, special, extra-ordinary and emergency)	✓	
Committees and Subcommittees of Council (if appointed a member)	✓	
Community Board meetings (if an appointed member)	✓	
Resource Consent Hearings (if an appointed member of the Hearings Panel)	✓	
WDC Advisory Group meetings (if appointed by the Council as its representative) (e.g. Ohoka Domain Advisory Group)	✓	
Formally representing Council (as a result of resolution of Council) at a formal meeting of another local authority	✓	
Meetings of other outside organisations as the Council's appointed representative (appointment pursuant to a Council resolution). (Note that meetings of Council Controlled Organisations and Trusts where Councillors and Community Board members are otherwise remunerated do not qualify for payment.)	✓	
Full Council workshops or briefings (which have the prior approval of the Mayor and Chief Executive) at which no resolutions or decisions are made. These workshops are to be held solely to discuss major policy or strategic issues of interest to all Councillors	✓	
Training and development courses, field trips, site visits, where authorised by the Mayor or formal resolution of Council or Community Board, in excess of four hours	✓	
Public meetings where the Council is officiating	✓	
Meetings with other statutory bodies to deal with issues which would be the responsibility of a Committee or Subcommittee of Council of which the Councillor attending is a member or which deal with issues directly affecting the Councillors Ward or Portfolio	✓	
Local Conferences/Seminars (if an appointed WDC representative) *Note – Local being generally the Canterbury region at the discretion of the Chief Executive and/or Governance Manager*	✓	
Working groups or working parties	✓	

Approved Events Eligible for Mileage Claim	Mileage	
	Paid	Not Paid
Field trips or site visits/inspections (including site visits for resource consent hearings where approved by Mayor or Committee Chairperson and advised to Governance Manager)	✓	
Briefings and discussions with the Mayor, Chief Executive, Senior Managers and Officers	✓	
Where Councillors, other than the Deputy Mayor, officiate at “official” functions as determined by the Mayor	✓	
Constituency meetings (either with individuals or organisations) unless there is formal approval from the Mayor or Chief Executive		**X**
Social functions		**X**
Event attendance in a non-representative/unofficial capacity		**X**
Travel not related to the business of the Waimakariri District Council		**X**
Personal travel interspersed with Council related business		**X**

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	GOV01-13/251113216245
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Sarah Nichols, Governance Manager
SUBJECT:	Elected Member Pecuniary Interests Register
ENDORSED BY: (for Reports to Council, Committees or Boards)	General Manager / pp Chief Executive

1. SUMMARY

1.1. The purpose of this report is to formally provide an update of the Register of Interests recording elected members pecuniary (financial) interests.

Attachments:

i. Draft 2025-26 Elected Member Register of Interest (Trim 251119220280).

2. RECOMMENDATION

THAT the Council:

(a) **Receives** Report No. 251113216245.

(b) **Notes** members supplied information directly to the Governance Manager to enable Register compilation no later than 24 November 2025.

(c) **Notes** the Register of Interests will be placed on the Council website.

(d) **Notes** a copy of this report will be circulated to the Community Boards, who are also subject to the Register.

(e) **Notes** the updated Elected Members Pecuniary Interests Register will be uploaded to the Council website prior to 20 December 2025.

3. BACKGROUND

3.1. In November 2022 an amendment was made to the Local Government Act being the Local Government (Pecuniary Interests Register) Amendment Act 2022. It inserted a new set of requirements and obligations into the LGA, all of which relate to members' pecuniary interests.

3.2. The purpose of the new provisions was to increase transparency, trust and confidence in local government by keeping and making publicly available, information about members' pecuniary interests. It is largely modelled on the regime that applies to members of Parliament, but has been tailored to reflect particular aspects of local government.

3.3. Members are obliged to provide annual returns, of which information is included on the registers, and to subsequently advise of any errors or omissions in those returns. Failure to comply with the new obligations amounts to an offence.

3.4. Law firm Simpson Grierson has provided an advice document on behalf of Taituara. This document sets out the Council and Registrar's obligations, Members obligations and relationship with other legislation.

3.5. The Council must appoint an administrator within Council (the Registrar) to keep the register regularly updated. The Governance Manager was appointed this role in March 2023.

3.6. It is only the members' interests that are required to be disclosed for the Pecuniary Interests Register. Interests of spouses, partners and other close family members do not need to be discussed under the LGA 2002 legislation.

4. ISSUES AND OPTIONS

4.1. A summary register is listed on the Council website which contains enough information about a pecuniary interest so that people can understand how it could impact any Council process or decision-making, and why it ought to have been disclosed, but no more than that. If a member of the public seeks further information about a particular interest, that would be considered as an official information request under the Local Government Official Information and Meetings Act (LGOIMA). Should such a request be received, the member to whom the interest relates will be advised accordingly.

4.2. Post election the Register is required to be update as soon as practical, with subsequent years the return information is reviewed and updated in February of every year. When a member becomes aware of a change of circumstance in their interest they must notify the Registrar accordingly.

4.3. The form seeking updated information was circulated to all elected members during November 2025. Information has been captured and updated on the attached documentation, with further information related to Community Board member appointments to groups, as it is formalised during their December meetings..

4.4. The Community Board members also completed the process of updating their pecuniary information and it is incorporated into the same Register.

Implications for Community Wellbeing

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

4.5. The Management Team have reviewed this report and supports 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.

5.2. Groups and Organisations

There are not groups and organisations likely to be affected by this report, but may have an interest in the subject matter of this report, noting that elected members will declare any conflicts of interest in matters before them at each meeting.

5.3. Wider Community

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

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1. Financial Implications

There are no financial implications of the decisions sought by this report. There are no budget implications from the recommendations in this report.

6.2. Sustainability and Climate Change Impacts

The recommendations in this report do not have sustainability and/or climate change impacts.

6.3. Risk Management

There are risks arising from the adoption/implementation of the recommendations in this report. The penalty of up to $5,000 can be imposed by the Secretary of Local Government on the elected member for failing to provide information.

6.4. 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

Local Government (Pecuniary Interests Register) Amendment Act 2022.

Local Government Act 2002.

Note the relationship with the Local Authorities (Members' Interests) Act 1968 (LAMIA), Privacy Act 2020 and the Local Government Official Information and Meetings Act 1987 (LGOIMA).

7.3. Consistency with Community Outcomes

The Council's community outcomes are relevant to the actions arising from recommendations in this report as the outcomes enable transparency of elected member information to the public.

7.4. Authorising Delegations

Local Government Act 2002 legislation requires compliance.

ELECTED MEMBERS – REGISER OF INTERESTS (including Pecuniary) as at 24 November 2025

Name	Position	Company Director (Sec 54E(1)(a))	Holding more than 10% of voting rights Yes / No (Sec 54E(1)(a))	Beneficial Interest in a Trust (sec 54E(1)(d))	Member of organisation or trust that receives Council funding (Sec 54E(1)(e))	Appointed to organisation (Sec 54E(1)(f))	Property Ownership	Pecuniary Interest Yes / No (Sec 54E(1)(b))
Dan Gordon	Mayor	Waitaha Primary Health Limited (WPH) and Waitaha Primary Health Holdings Ltd – Council appointed Board member. Waitaha Primary Health Aoraki Limited (associated with WPH) Local Authority Protection Programme – LGNZ Appointed Board Member	Yes	No	Waimakariri Arts Trust (Kaiapoi Art Expo) Trustee Enterprise North Canterbury (Council appointment) Trustee	Canterbury Mayoral Forum Zone 5 Chair – LGNZ LGNZ National Council Canterbury Civil Defence Emergency Management Joint Committee Canterbury Regional Land Transport Committee Canterbury Regional Council Passenger Transport Advisory Group Greater Christchurch Partnership/Whakawhanake Kainga Committee, Urban Growth partnership for Greater Christchurch Greater Christchurch Public Transport Joint Committee Co-Chair – Communities 4 Local Democracy Climate Change Action Planning Reference Group Waimakariri Passchendaele Advisory Group Ex-Officio – all WDC Committees Enterprise North Canterbury Waimakariri Youth Council Transport Forum member LGNZ Southbrook Road Improvements Working Group and Reference Group North Canterbury Health Hub Project Steering Group AP & LTP Project Control Group	Family residence within Waimakariri	
Timothy (Tim) Bartle	Councillor	Bartle Developments 2000 Ltd	Bartle Developments 2000 Ltd	No	The Mainland Staffordshire Bull Terrier Society Clarkville Hall Committee Nth Canterbury Neighbourhood Support	Waimakariri Health Advisory Group North Canterbury Neighbourhood Support Waimakariri District Licencing Committee Kaiapoi Marine Precinct Bookings Advisory Group Waimakariri Walking & Cycling Reference Group Central Drainage Advisory Group Clarkville Rural Drainage Advisory Group Coastal Rural Drainage Advisory Group Solid & Hazardous Waste Working Party	Family residence within Waimakariri	**Declared No**

Name	Position	Company Director (Sec 54E(1)(a))	Holding more than 10% of voting rights Yes / No (Sec 54E(1)(a))	Beneficial Interest in a Trust (sec 54E(1)(d))	Member of organisation or trust that receives Council funding (Sec 54E(1)(e))	Appointed to organisation (Sec 54E(1)(f))	Property Ownership	Pecuniary Interest Yes / No (Sec 54E(1)(b))
Brent Cairns	Councillor	No	No	No	Kaiapoi Food Forest All Together Kaiapoi Food Secure North Canterbury Neighbourhood Support	Road Safety Working Group Property Asset Working Group (Chair) Waimakariri Art Collection Trust Waimakariri Public Arts Trust Waimakariri Community Arts Council Promotions Association Review Working Group Arohatia Te Awa Working Group Kaiapoi Promotions Association	Family residence within Waimakariri	No
Ena (Wendy) Doody	Councillor	No				Waimakariri District Licencing Committee Property Asset Working Group (Chair) Social Services Waimakariri Facilities & Consents Fee Waiver Subcommittee Solid & Hazardous Waste Working Party	Family residence within Waimakariri	No
Tim Fulton	Councillor	No	No	GH Fulton Family Trust	Oxford Health & Fitness Centre Trust (Chair) Wollfs Road Footbridge Society Inc (Chair)	Pearson Park Advisory Board Southbrook Sports Club (working group) Experience Oxford North Canterbury Neighbourhood Support All WDC Drainage Advisory Boards and Ecan/HDC/WDC River Rating Committees Waimakariri Water Race Advisory Group Promotions Association Review Working Group Facilities & Consents Fee Waiver Subcommittee (Chair)	Family residence within Waimakariri	No
Jason Goldsworthy	Councillor	No	No	No	North Canterbury Neighbourhood Support	Waimakariri District Licencing Committee Waimakariri Youth Council Waimakariri Age-Friendly Advisory Group Promotions Association Review Working Group Facilities & Consents Fee Waiver Subcommittee (Chair) Waimakariri Walking & Cycling Reference Group Central Rural Drainage Advisory Group Solid & Hazardous Waste Working Party Rangiora Promotions Management Board	Family residence within Waimakariri	
Bruce McLaren	Councillor	No	No	No	Rangiora Community Patrol	North Canterbury Neighbourhood Support Rangiora and Districts Early Records Society Inc Waimakariri District Licencing Committee Landmarks Committee North Canterbury Museums Group Arohatia Te Awa Working Group Property Asset Working Group (Chair) Promotions Association Review Working Group Facilities & Consents Fee Waiver Subcommittee (Chair)	Family residence within Waimakariri and residential section in Christchurch	No

Name	Position	Company Director (Sec 54E(1)(a))	Holding more than 10% of voting rights Yes / No (Sec 54E(1)(a))	Beneficial Interest in a Trust (sec 54E(1)(d))	Member of organisation or trust that receives Council funding (Sec 54E(1)(e))	Appointed to organisation (Sec 54E(1)(f))	Property Ownership	Pecuniary Interest Yes / No (Sec 54E(1)(b))
Veronika (Niki) Mealings	Councillor	No	No	No	Waimakariri Biodiversity Trust	Waimakariri District Licencing Committee Greater Christchurch Partnership/Whakawhanake Kainga Committee, Urban Growth partnership for Greater Christchurch Canterbury Waste Joint Committee Canterbury Regional Landfill Joint Committee Recovered Materials Foundation (TerraNova) Climate Change Action Planning Reference Group Biodiversity Champions Group CCC Coastal Hazards Working Group (observer) Waimakariri Youth Council Property Asset Working Group (Chair) Ohoka Rural Drainage Advisory Group Arohatia Te Awa Working Group Mandeville Sports Club Committee Solid & Hazardous Waste Working Party (Chair) Natural Environment Strategy Project Control Group	Family residence within Waimakariri	
Shona Powell	Councillor	Shoco Ltd	Shoco Ltd	Glendale Farm Trust	Pegasus Residents' Group (member)	Waimakariri Access Group (Chair) Creative Communities NZ Assessment Committee Northern Pegasus Bay Advisory Group (Chair) Community Wellbeing North Canterbury Trust North Canterbury Health Hub Project Steering Group Promotions Association Review Working Group Kaiapoi Marine Precinct Bookings Advisory Group Facilities & Consents Fee Waiver Subcommittee (Chair)	Family residence within Waimakariri	Yes
Philip Redmond	Councillor	Boronia Properties Ltd Canterbury Conveyancing Ltd Kaiapoi Law Ltd Car HQ (2019) Ltd	Boronia Properties Ltd Canterbury Conveyancing Ltd Kaiapoi Law Ltd Car HQ (2019) Ltd	Redmond Family Trust	Kaiapoi Promotions Association (Life Member) Coastguard North Canterbury (Patron) Pegasus Residents Group (member) Kaiapoi Maritime Heritage Trust (Chair) RSA Kaiapoi (member) North Canterbury Sport and Recreation Trust (NCSRT)	Waimakariri District Licencing Committee (commissioner/deputy chair) Rangiora Airfield Advisory Group Enshi Sister City Advisory Group Waimakariri Passchendaele Advisory Group Greater Christchurch Partnership/Whakawhanake Kainga Committee, Urban Growth partnership for Greater Christchurch Road Safety Working Group Southbrook Road Improvements Working Group and Reference Group Property Asset Working Group (Chair) Solid & Hazardous Waste Working Party	Residential and Commercial property within Christchurch and Waimakariri.	No

Joan Ward	Councillor	No	No	Ward Trustee Ltd	North Canterbury Sport and Recreation Trust (NCSRT)	Canterbury Museum Trust Board Standing Committee North Canterbury Sport and Recreation Trust Southbrook Road Improvements Working Group and Reference Group Promotions Association Review Working Group AP & LTP Project Control Group	Family residence within Waimakariri	No
Elizabeth (Liz) McClure (Chair)	Rangiora-Ashley Community Board member	IT Evolution Ltd	IT Evolution Ltd	No	No	Board to consider appointments 10 December 2025	Family residence within Waimakariri	
Kirstyn Barnett	Rangiora-Ashley Community Board member	No	No	No	No	Board to consider appointments 10 December 2025	Family residence within Waimakariri	
Robbie Brine	Rangiora-Ashley Community Board member	No	No	No	No	Board to consider appointments 10 December 2025	Family residence within Waimakariri	No
Alan Geeves	Rangiora-Ashley Community Board member	No	No	No	No	Board to consider appointments 10 December 2025	Family residence within Waimakariri	No
Richard (Jim) Gerard	Rangiora-Ashley Community Board (Chair)	No	No	Gerard Family Trust	Rangiora Promotions	Commissioner District Licensing Committee Board to consider appointments 10 December 2025	Nil.	No
Diana Hawkins	Rangiora-Ashley Community Board member	Crimson Start (2016) Ltd Karikaas Natural Diary Products Holdings Ltd Karikaas Natural Diary Products Ltd Hawkins Consulting Ltd Crianza En Verde Ltd	Yes	No	No	Board to consider appointments 10 December 2025	Family residence within Waimakariri	No
Duncan Lundy	Rangiora-Ashley Community Board member					Board to consider appointments 10 December 2025	Family residence within Waimakariri	
Brent Robinson	Rangiora-Ashley Community Board member	No	No	No	No	Board to consider appointments 10 December 2025	Family residence within Waimakariri	No
Sarah Barkle (Chair)	Oxford-Ohoka Community Board (Chair)	No	JB Demex Ltd	No	Wollfs Road Footbridge Incorporated Society	Board considering positions 3 December 2025	Family residence within Waimakariri	No
Mark Brown	Oxford-Ohoka Community Board member	Oxford Health Charity Ltd	No	No	No	Board to consider appointments 3 December 2025 Oxford Community Health Clinic	Family residence within Waimakariri	No
Wayne Godfrey	Oxford-Ohoka Community Board member	Godfrey Pest Management Ltd	No	Godfrey Family Trust		Canterbury Regional Council – Biosecurity Advisory Group (Northern) Board to consider appointments 3 December 2025	Family residence within Waimakariri	No
Ray Harpur	Oxford-Ohoka Community Board member	Rowallan Enterprises Ltd	Rowallan Enterprises Ltd	No	No	Board considering positions 3 December 2025	Family residence within Waimakariri Christchurch property	

Peter (Pete) Merrifield	Oxford-Ohoka Community Board member	Kapet Properties Pete's Maintenance Services Ltd	No	No	No	Board considering positions 3 December 2025	Family residence within Waimakariri Residential property in Christchurch	Yes
Thomas Robson	Oxford-Ohoka Community Board member	No	No	No	Oxford Community Trust – Chair	Oxford Community Trust Board considering positions 3 December 2025	Family residence within Waimakariri	
Mark Paterson (Chair)	Woodend-Sefton Community Board member	No	No		Woodend Community Association Woodpecker Board Woodend Rugby Club	Board considering positions 8 December 2025	Family residence within Waimakariri	
Joel McLachlan	Woodend-Sefton Community Board Member	AdviceKiwi Ltd				Board considering positions 8 December 2025	Family residence within Waimakariri	
Mathew Potter	Woodend-Sefton Community Board Member	No	No	MREL Potter Trust	Pegasus Residents Group Inc (committee member)	Board to consider appointments 8 December 2025	Nil.	No
Prudence Stone	Woodend-Sefton Community Board Member	Medusa Enterprises Ltd	Medusa Enterprises Ltd	Yes	Woodpecker Trust Board Woodend Community Association Lions Club of Woodend Pegasus	Board to consider appointments 8 December 2025	Family residence within Waimakariri	No
Andrew Thompson	Woodend-Sefton Community Board Member	Thompson Commercial Ltd Andot Properties MainPower Trust Investments Ltd MainPower NZ Ltd	Thompson Commercial Ltd Andot Properties	MainPower NZ Trust (Trustee)	Waimakariri Biodiversity Trust	Board considering positions 3 December 2025	Family residence within Waimakariri	
Jackie Watson	Kaiapoi-Tuahiwi Community Board (Chair)	No	No	No	All Together Kaiapoi – community trust Waimakariri Public Arts Trust Kaiapoi Community Garden Waimakariri Arts Trust Waimakariri Community Arts Council	Pines Kairaki Beach Association Waimakariri Arts Trust Northern Pegasus Bay Advisory Group Silverstream Advisory Group	Family residence within Waimakariri	
Abbie Campbell	Kaiapoi-Tuahiwi Community Board member	No				Waimakariri Health Advisory Group	Family residence within Waimakariri	
Henrietta Carroll	Kaiapoi-Tuahiwi Community Board member	Wairewa Ltd Kaitorete Ltd Whai Rawa Fund Ltd He Waka Tapu Ltd				Waimakariri Access Group Darnley Club Heritage & Mahinga Kai Joint Working Group	Family residence within Waimakariri	
Russell Keetley	Kaiapoi-Tuahiwi Community Board member	No	No	No	Waimakariri Biodiversity Trust	Kaiapoi & Districts Historical Society Kaiapoi Landmarks Team Northern Bulldogs Rugby League Club	Family residence within Waimakariri	
Sandra Stewart	Kaiapoi-Tuahiwi Community Board member	No	No	No	Waimakariri Biodiversity Trust	Grey Power North Canterbury Kaiapoi Promotions Association Clarkville Rural Drainage Advisory Group Central Rural Drainage Advisory Group Coastal Rural Drainage Advisory Group	Family residence within Waimakariri	No

This is a living document and correct as at 24 November 2024. Elected members can advise and update the document at any time.

Community Boards are appointing membership to outside organisations during December, after which the document will be updated again.

This Register will be placed on the Council website.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	GOV-26-10-06 / 250904167536
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Sarah Barkle – Chairperson Oxford-Ohoka Community Board
SUBJECT:	Chairperson's Report for the period of 1 January 2025 to 30 September 2025

ENDORSED BY:
(for Reports to Council, Committees or Boards)

General Manager | pp Chief Executive

1 SUMMARY

This report aims to inform the Council of the Oxford-Ohoka Community Board's (the Board) activities for the period 1 January 2025 to 30 September 2025 in accordance with the Board's Terms of Reference.

2 RECOMMENDATION

THAT the Council:

(a) **Receives** report No. 250904167536.

(b) **Circulates** a copy of this report to all the Community Boards.

3 BACKGROUND

3.1 It is customary for Community Board Chairpersons to report their Board's progress and achievements to the Council. The report for the previous year, covering the period from 1 January to 31 December 2024 was presented to the Council at its meeting on 7 February 2025.

3.2 The Board comprises eight members; six elected Board members and two appointed Ward Councillors. All members took their oath of office at the Board's inaugural meeting on 27 October 2022.

3.3 Following the 2022 Local Body Elections, the Board developed a three-year Community Board Plan. This Plan outlined the Board's objectives, key achievements, and work programme, which is reviewed annually. Actions detailed in this report align directly with the performance expectations set out in the Community Board Plan.

4. ISSUES AND OPTIONS

4.1 Between 1 January and 30 September 2025, eight ordinary Board meetings were held, as no meeting was held in January 2025. Ordinary meetings were held on the first Wednesday after the Council meeting at various venues in the Ward, such as the Ohoka Community Hall, West Eyreton Community Hall, Mandeville Sports Club and the Oxford Town Hall. Attendance records show that three members attended all Board meetings, while other members tendered apologies for several meetings.

4.2 On 31 October 2019, the Board resolved to hold public forums as part of its scheduled meetings, and this continued into the 2022-2025 term. As a result, public forum sessions occurred at two meetings during the period under review, where the public raised the following issues:

Meeting	Presenter	Organisations Represented	Issue
April 2025	Tony Gardiner	Local Truck Driver	Concern regarding shading by shelter belts, especially along Tram Road.
August 2025	K Arona & J Cockburn	Shirley Boys' High Students	Concern regarding intersection safety along Tram Road.
August 2025	AJ Lowe	Ohoka Residents Association	Thanked the Board for their involvement in opposing the Carter Group's proposed Ohoka Development (Plan Change 31).
August 2025	I Shrimpton	Weatherfield Lane resident	Concern regarding the periodic flooding of the stock race outside his property.
August 2025	L and J King	Redfern Lane resident	Requesting a status report on the Mandeville Resurgence programme.
August 2025	M Tyree	Resident	Concerns about the Proposed District Plan process.
August 2025	L Eason	Clear View Lane resident	Concern regarding uncompleted drainage works in the area.
August 2025	L Reidie	Resident	Concern regarding light spillage and lack of irrigation for new plantings of the replacement Mandeville Domain Shelterbelt.

4.3 The Board also attended numerous workshops and briefings which considered a range of matters, including:

- Annual Plan discussions for both Environment Canterbury and Waimakariri District Council
- Woodstock Quarries Submission discussions
- Recreation Capital Works Programme
- Environment Canterbury updates
- Parking issues in Oxford
- Mandeville Resurgence Channel updates
- Landscape Budget allocations
- Mahi Mātātoa Trust update
- Natural Environment Strategy
- Three Waters update
- Waimakariri District Plan
- School Speed Zone Planning
- Community Board Submission Policy
- Election Protocols

4.4 The Board made three submissions during the period under review in relation to:

- Waimakariri District Council 2024-34 Draft Long Term Plan
- Environment Canterbury's Draft Long Term Plan 2024-34
- The Government's Woodend Bypass toll proposal.

The Board also worked extensively on:

- Opposition to Woodstock Quarry application.
- Continued opposition to the proposed Ohoka Development (became a party to the Proposed District Plan appeal).

4.5 The Board heard deputations on the following issues:

- Updates from Environment Canterbury's Councillor C McKay, who attended three meetings during the year.
- Oxford Health Centre update
- Oxford Food Forest
- Wolffs Bridge update
- Pearson Park stage roof project.

4.6 There were several significant issues the Board considered, which included:

- The Woodstock Quarry application
- Flooding issues
- The Mandeville Resurgence Project
- A storage container for the Oxford Art Gallery
- West Eyreton Scouts storage shed
- Mandeville Domain entrance shelterbelt replacement plan
- Parking restrictions throughout the Oxford-Ohoka Ward
- EV charger and transformer installations at Pearson Park
- Pearson Park Pump Track Consultation
- Kowhai Street Reserve Lighting
- Road naming for new roads in the Oxford-Ohoka Ward
- Roading and Recreation Capital Works Programme
- School Variable Speed Limits
- ANZAC Day Services
- Allocations of Board funding and landscape budget
- Various Discretionary Grant funding applications
- Changes to Board representation appointments.

4.7 Board members attended several public meetings and drop-in Sessions, which included:

- Mandeville Resurgence public meetings
- Environment Canterbury and Waimakariri District Council Annual plans
- Proposed District Plan
- Community Hub openings and meetings
- A8 and Tsunami presentations
- Oxford A & P Show
- Swannanoa School Fair
- Oxford Networking Group
- Oxford Gym Opening
- Oxford Dog Park Opening
- Community Service Awards
- Wolffs Bridge
- Proposed Community Police changes.

4.8 The Board approved a range of grants to community organisations.

In summary, the Board approved nine applications during the period from 1 January to 30 September 2025, with two applications being declined. A total of $4,481 was allocated during this period. The Board has also noticed an increase in discretionary grant applications, both in terms of the number of groups applying and the increased amounts being requested. (The financial year runs from 1 July to 30 June.)

Year	Amount Allocated	Approved	Declined	Balance Remaining	Balance Outcomes
2024/25	$2,102 (as at 1 January 2025)	$2,100	One	$2* (as at 30 June 2025)	Funds were carried forward to the 2025/26 financial year.
2025/26	$6,755 (As at 1 July 2025)	$2,381	One	$4,884 (as at 330 September 2025)	Balance to be spent before July 2025

** $150 was not uplifted by the Group, and $133 was returned as unspent from the Group; therefore, the funds were included with the $2 remaining in the budget and carried forward into the next financial year.*

4.9 The Board received an allocation of $14,330 from the Council for its 2025 Landscape Budget; however, the budget has been left for the new Board to allocate to projects. Therefore, the current balance available for allocation is $14,330, with the following projects making up some of the projects from previous financial years:

- Ashley Gorge Track – completed.
- Ashley Gorge info kiosk - currently being built, and the Board funding will be passed on once it receives an invoice.
- Ohoka Stream walkway seat – completed.
- West Eyreton historic signage – structure has been built and is awaiting the Engagement and Communication Team to provide design for the information panel.
- The Oaks Reserve development – on hold.
- Flag tracks for Oxford flags – completed.

Some of the projects considered for the 2024/25 budget were:

- Mandeville Reserve Legacy Area recognising the contribution of Ron Dalley, Gordin Fulton and Bob Ralls. Awaiting a design from the Mandeville Sports Club.
- Mandeville Cemetery (Bradleys Road cemetery tidy up) – on hold until clarity on the proposed Carter residential development process has been completed.
- Oxford Dog Park seating and shelter – currently in discussions with Oxford Lions regarding them funding half the project as well as building the shelter.
- Oxford Menz Shed has built railway siding signage. The next step is to get the sign writing done and the signs installed. This should be completed by the end of 2025.
- Wards Road Planting – gorse has been removed and the area sprayed. Planting is expected to take place by October 2025.

4.10 The Board's performance expectations link directly to the Council's Community Outcomes. The four key performance expectations are:

(1) Develop and promote the Community Board as a vehicle for local residents to seek assistance and advocacy in accessing council services and consultation processes.
(2) Develop closer links and relationships with key settlements and groups in the Oxford Ward, as well as with significant district-wide organisations.
(3) Develop strategies for the Board to become a compelling, cohesive voice in representing the community viewpoint at meetings and policy hearings.
(4) To actively participate in council business and the annual budget process to ensure equitable spending across the district whilst being mindful of rates affordability.

4.11 By reviewing the 27 reports referred to the Board and decisions for the period of 1 January to 30 September 2025, against the above-listed community outcomes, we believe the following table fairly represents the performance outcomes:

Performance Expectations	(1)	(2)	(3)	(4)
Number of Reports (27)	22	26	17	18

4.12 **Chairperson's Comments**

4.12.1 This year, the Board has continued to serve as a strong and effective voice for its community. My fellow board members have remained dedicated and supportive of each other, consistently working toward positive outcomes for the Ward. The support and respect we receive from Mayor Gordon and our Councillors is genuinely appreciated and reflects the value and effort Community Boards bring to the district. We are also fortunate to work alongside high-calibre council staff—an invaluable resource that consistently supports the Board's efforts. These strong relationships are a real win for the community.\

4.12.2 The pace of work has remained high in 2025. We have continued to manage our usual responsibilities while also staying actively involved in Environment Court proceedings on behalf of our community.

4.12.3 One major issue before the Court is the Woodstock Quarries landfill application. The Community Board has remained involved to ensure our community has a voice in the process. While Environment Court proceedings often focus heavily on expert evidence, sometimes to the exclusion of community perspectives, we believe we can contribute meaningfully as representatives of current and future ratepayers. It is our role to ensure community concerns are heard and considered.

4.12.4 The proposed Ohoka Development by the Carter Group has now progressed, which allows the Board to continue the community opposition. The Carter Group had appealed to the Environment Court after an earlier application for a Plan Change under the former District Plan was declined by commissioners. A separate rezoning request under the proposed District Plan was also declined. They then had three possible paths:

(a) Continue with their appeal to the Environment Court regarding the original plan change.
(b) Drop that Appeal and instead appeal the zoning decision under the proposed district plan (deadline: August 22).
(c) Await the outcome of their application to have the project fast-tracked under central government legislation.

4.12.5 The Environment Court had instructed the Carter Group to choose one avenue and not pursue all three. The Carter Group decided to proceed with the appeal against the zoning decision under the district plan. The Community Board then became a party to the Appeal to ensure the community remains represented, with a hearing scheduled in November 2025.

4.12.6 On a more positive note, we have made significant progress in preserving our local rail history. This heritage project is already underway. The first stage includes installing a West Eyreton rail-inspired placename sign on the northern side of North Eyre Road, near West Eyreton Hall. Next, an information kiosk will be installed in the Oaks Reserve, across from the hall, to share the history of the rail line that once ran through West Eyreton. It is hoped that this initiative will expand to include other significant locations in the future.

4.12.7 A related and equally inspiring initiative is the restoration of the historic Wolffs Road Bridge. After learning of the bridge's deterioration, the Board considered several options: complete dismantling, partial dismantling with towers left as legacy structures, or complete restoration. Public consultation revealed strong support for full restoration; however, budget constraints made this unfeasible for the Council alone. Thanks to Councillor Tim Fulton's leadership, a new incorporated society, the Wolffs Road Footbridge Group, has been formed to lead this restoration effort. Though still in its early stages, it promises to be a community-driven project complete of local pride and participation.

4.12.8 The Ashley Gorge Reserve is a fantastic asset to both Oxford and the wider district. This stunning natural space is cared for by a dedicated team of volunteers who work tirelessly to preserve its beauty and uphold its high standards. A highlight this year was the opening of an accessibility track — an exciting development that further enhances the reserve's inclusivity and broadens its appeal. The Community Board deeply appreciates the vision, dedication, and ongoing efforts of this volunteer group, whose work continues to enrich the area for all to enjoy.

4.12.9 On 12 April 2025, we celebrated the long-awaited opening of the Oxford Dog Exercise Area. This facility is already proving to be a valuable community asset. As people begin using the area, we expect further improvements over time, based on feedback and need.

4.12.10 Flood management — particularly in Mandeville — remains an ongoing challenge. Some larger projects have overshadowed more minor but critical works. This has now been recognised and will hopefully be addressed in the coming year. It is also clear that a more thorough understanding of the existing drainage systems and complex resurgence flows is needed to reduce flooding most effectively and efficiently. This will be a crucial issue for the next Board to champion. We need to continue to drive this forward.

4.12.11 Meanwhile, the Oxford pump track proposals are gaining momentum. Two passionate community groups have recognised this need and are driving efforts to bring this initiative to life. One proposal is about to go out for public consultation, and we look forward to the next steps once feedback is gathered. Oxford has a reputation for finding solutions and meeting needs, with this being a great example of that.

4.12.12 Roading also continues to be a priority issue in our Ward and frequently features in our submissions to Council. We are pleased to see safety improvements scheduled for several intersections along Tram Road.

4.12.13 Another inspiring project came from a local couple who have already successfully planted areas of the Dawson Road drainage ponds. They proposed a beautification and planting project for the walkway between Wards Road and Tram Road. The Board has supported this idea and approved funding through the Landscaping Budget. We hope the project will involve contributions from the wider community, including students from Te Koromiko Swannanoa School, local residents and potentially sports clubs, to create a valuable shared space. We look forward to seeing this project take off soon.

4.12.14 In addition to these larger projects, we have also seen success in resolving smaller drainage and roading issues, maximising the use of discretionary funding, and enhancing local landscaping initiatives. The Board continues to advocate for logical, efficient systems. We are acutely aware of the financial pressures our residents face and have taken a prudent approach to spending. We have worked hard to strike a balance between fiscal responsibility and maintaining essential infrastructure and services. It's important to tighten the purse strings, however, not so much that we fall behind in ways that are difficult to recover from in the future.

4.12.15 I want to express my sincere thanks to the current Board. Your dedication and contributions this year have been outstanding; each of you has brought significant value to the table. We have all worked together to achieve positive outcomes for our community; you should all be proud of your efforts. I wish the incoming Board all the very best for the next term ahead.

4.13 **Implications for Community Wellbeing**

There are no implications on community wellbeing by the issues and options that are the subject matter of this report, however, the report does highlight projects and initiatives that enhance community amenity and wellbeing.

4.14 The Management Team has reviewed this report.

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.

5.2. Groups and Organisations

There are no groups or organisations likely to be affected by, or to have an interest in, the subject matter of this report.

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. However, the Board strives to build and maintain good relationships within the community and with Board members; therefore, they regularly attend community meetings and events and take every opportunity to gather feedback.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1 Financial Implications

The decisions sought by this report have no financial implications, as the servicing of Community Boards is met within the Council's existing Governance Budgets.

6.2 Sustainability and Climate Change Impacts

The recommendations in this report do not have sustainability and/or climate change impacts.

6.1 Risk Management

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

6.4 Health and Safety

There are no health and safety issues 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

Local Government Act 2002 Schedule 7 clause 19 - A Local Authority must hold the meetings that are necessary for the good government of its region or district.

7.3 Consistency with Community Outcomes

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

People are friendly and caring, creating a strong sense of community in our District.

There are wide-ranging opportunities for people of different ages and cultures to participate in community life and recreational activities.

7.4 Authorising Delegations

Delegation to Community Boards, Part 3, S-DM 1041, Issue 10, as at 25 October 2019.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	GOV-26-08-06 / 250922179735
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Jackie Watson – Chairperson Kaiapoi-Tuahiwi Community Board
SUBJECT:	Chairperson's Performance Report for the Kaiapoi-Tuahiwi Community Board, 1 January to 30 September 2025

ENDORSED BY:
(for Reports to Council, Committees or Boards)

General Manager | pp Chief Executive

1. SUMMARY

The purpose of this report is to inform the Council of the Kaiapoi-Tuahiwi Community Board's (the Board) activities for the period 1 January to 30 September 2025 in accordance with the Board's Terms of Reference.

2. RECOMMENDATION

THAT the Council:

(a) **Receives** report No. 250922179735.

(b) **Circulates** a copy of this report to all the Community Boards.

3. BACKGROUND

3.1 It is customary for Community Board Chairpersons to report their Board's progress and achievements to the Council. The report for the previous year was presented to the Council at its meeting held on 7 February 2025.

3.2 The Board comprises of seven members, five elected Board members and two appointed Ward Councillors. All members took their oath of office at the Board's inaugural meeting on 27 October 2022. While all four Kaiapoi-Woodend Ward Councillors actively participated in Board discussions, only the two Councillors formally appointed by the Council to the Board held voting rights.

3.3 Following the 2022 Local Body Elections, the Board developed a three-year Community Board Plan. This Plan outlined the Board's objectives, key achievements, and work programme, which is reviewed annually. Actions detailed in this report align directly with the performance expectations set out in the Community Board Plan.

4. ISSUES AND OPTIONS

4.1 Between 1 January and 30 September 2025, eight ordinary Board meetings were held, as no meeting was held in January 2025. The Ordinary meetings took place on the third Monday of each month at the Ruataniwha Kaiapoi Civic Centre. Attendance records show that two members attended all meetings, while five members tendered apologies for one or more meetings.

4.2 The Board also attended numerous workshops and considered a range of matters that included:

- Annual Plan discussions for both Environment Canterbury and Waimakariri District Council
- Submission on the New Zealand Transport Agency (NZTA) speed review
- Environment Canterbury's proposed river works
- Historic walkway signage
- Recreation Capital Works Programme
- Silverstream Boulevard Traffic Calming
- Kaiapoi Lakes Raupo Management
- Variable speed limits outside schools
- Kaiapoi entrance signage.

4.3 The Board also made submissions in relation to the Environment Canterbury and Waimakariri District Council's 2025/26 Annual Plans, the NZTA speed review and the Government's Woodend Bypass toll proposal.

4.4 The Board heard deputations on the following topics:

- Possible volleyball court in Kaiapoi
- Rubbish collection
- Centennial Celebrations
- Safety platforms for Silverstream Boulevard
- Cam River Planting Plan
- Management of Raupo growth in Kaiapoi Lakes
- Kaiapoi Bridge balustrade design
- Core Boards.

4.5 There were several significant issues the Board considered, including:

- Charles Street Scheme Design and Mobility Parks
- Norman Kirk Park and Currie Park Master Plans
- Murphy Park Concept Plan
- Volleyball net in Kaiapoi Domain
- Kaiapoi to Woodend Walkway and Cycling connections
- Clarkville School Road Safety Improvements
- School Variable Speed Limits
- Old North Road, Kaiapoi – Woodend cycleway
- Lees Road footpath
- Road Naming
- Various Parking restrictions throughout the Kaiapoi-Tuahiwi area
- Kaiapoi Community Hub play space
- Kaiapoi Menz Shed Concept Plan
- Core Boards at Trousselot Park
- Kaiapoi Lakes enhancement opportunity and collaboration
- Capital Works Programme for Roading and Recreation
- Design brief and contestable process for town entrance
- Kaiapoi entrance sign
- ANZAC Day Services
- Various Discretionary Grant fund applications

4.6 Board members attended public meetings and drop-in sessions, which included:

- 2025/26 Waimakariri District Council and Environment Canterbury's Annual Plan
- Woodend Bypass Drop-in Session
- National Council of Women
- Biodiversity Networking Trust
- The opening of Fairy Forest
- Several AGMs such as Kaiapoi Museum, Kaiapoi Community Gardens, Citizen Advice Bureau, North Canterbury Neighbourhood Support, Pines Kairaki Beach Association, Kaiapoi Food Forest, GreyPower
- Several of the RSA and ANZAC Day Services and parades
- The Kaiapoi Art Expo and Blackwells Winter Festival.

4.7 The Board also approved a range of grants to community organisations. In summary, the Board received 14 applications for funding from 1 January 2025 to 30 September 2025, two of which were declined, and one organisation failed to uplift the funds.

Year	Amount Allocated	Approved	Declined	Balance Remaining	Balance Outcomes
2024/25	$3,899 (As at 1 January 2025)	$3,442	0	$1,259 (as at 30 June 2025)	Funds were carried forward to the 2025/26 financial year
2025/26	$10,049 (As at 1 July 2024)	$2,440	2	$7,609 (as at 30 September 2025)	Until June 2026

4.8 The Board received an allocation of $29,290 from the Council for its 2025/26 Landscape budget. Currently, the following projects are being progressed:

- Town entrance development
- Planting beneath the Pines and Kairaki entrance sign – completed
- Entrance sign on Main North Road, tree planting, entrance signage design – in progress.

4.9 The Board's performance expectations link directly to the Council's Community Outcomes. The four key performance expectations are:

(1) Develop and promote the Community Board as a vehicle for local residents to seek assistance and advocacy in accessing council services and consultation processes.
(2) Develop closer links and relationships with key settlements and groups in the Kaiapoi-Woodend Ward and with significant district-wide organisations.
(3) Develop strategies for the Board to become a compelling, cohesive voice in representing the community viewpoint at meetings and policy hearings.
(4) To actively participate in council business and the annual budget process to ensure equitable spending across the district whilst being mindful of rates affordability.

4.10 By reviewing the 37 staff reports and decisions during the period of 1 January to 30 September 2025 against the above-listed community outcomes, we believe the following table represents the performance outcomes:

Performance Expectations	(1)	(2)	(3)	(4)
Number of Reports (37)	31	34	27	25

4.11 **Chairperson's Comments**

4.11.1 The Board continued to work on projects that encourage visitors to the Waimakariri District and create a pleasant environment for residents. This year saw the commencement of work on the town entrances, with trees planted and artists approached to create a suitable sign design. Other signage around Kaiapoi, showcasing its history, has now been completed and installed. Work has begun on the designs for the Kaiapoi Bridge refurbishment, funded by a generous donation from a long-term resident.

4.11.2 Community groups and individuals who have made presentations to the Board this year covered a wide range of topics. The Board assisted where possible. Requests were made for a volleyball court, core boards, better management of raupo in Kaiapoi Lakes, a Cam River Planting Plan and safety platforms for Silverstream Boulevard.

4.11.3 The Board was also able to assist groups that applied for funding from the discretionary grant fund after careful consideration.

4.11.4 Traffic safety matters were frequently dealt with, including the Charles Street roundabout, Clarkville School parking and drop off issues, Lees Road footpath, the Kaiapoi–Woodend cycleway and the temporary closure of Charles Street on Anzac Day, as well as school speed limits and review of parking restrictions.

4.11.5 Ensuring our reserves meet public needs, the Board approved Master Plans for Currie and Murphy Parks, a play space for the Kaiapoi Community Hub, and a concept plan for the Kaiapoi Menzshed.

4.11.6 The planned Woodend Bypass has created unwelcome issues such as the proposed tolling, and the Board has joined the Council in submitting in opposition to road tolls as the resulting impact will add to traffic difficulties as well as being unfair to residents.

4.11.7 Board members have attended many public meetings and have made solid connections to their community, listening to and responding to any concerns they might have. I want to thank my fellow Board members for their work in this regard and for their expertise around the Board table, as they debate issues of importance to the development and growth of our community and make decisions beneficial to residents.

4.11.8 The new Kaiapoi attracts visitors who are well served by the activities available and new residents who are happy to be a part of the friendly, welcoming and picturesque small river town, blessed with plenty of reserves and green spaces that highlight its geography.

4.11.9 With the final section of former red zone land about to be developed, the future looks very rosy for the Kaiapoi Tuahiwi ward.

4.11.10 Thanks must go to Board members for their continued work and commitment in supporting their community.

4.12 **Implications for Community Wellbeing**

There are no implications on community wellbeing by the issues and options that are the subject matter of this report, however, the report does highlight projects and initiatives that enhance community amenity and wellbeing.

4.13 The Management Team has reviewed this report.

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.

5.2 **Groups and Organisations**

There are no groups and organisations likely to be affected by, or to have an interest in the subject matter of this report.

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. However, the Board strives to build and maintain good relationships within the community and with Board members; therefore, they regularly attend community meetings and events and take every opportunity to gather feedback.

6. OTHER IMPLICATIONS AND RISK MANAGEMENT

6.1 **Financial Implications**

There are no financial implications of the decisions sought by this report, as the servicing of Community Boards is met within the Council's existing Governance Budgets.

6.2 **Sustainability and Climate Change Impacts**

The recommendations in this report do not have sustainability and/or climate change impacts.

6.3 **Risk Management**

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

6.4 **Health and Safety**

There are no health and safety issues 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**

Local Government Act 2002 Schedule 7 clause 19 - A Local Authority must hold the meetings that are necessary for the good government of its region or district.

7.3 **Consistency with Community Outcomes**

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

People are friendly and caring, creating a strong sense of community in our District.
There are wide-ranging opportunities for people of different ages and cultures to participate in community life and recreational activities.

7.4 **Authorising Delegations**

Delegation to Community Boards, Part 3, S-DM 1041, Issue 10, as at 25 October 2019.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	GOV-01-11 / 250922179987
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Jim Gerard – Chairperson Rangiora-Ashley Community Board
SUBJECT:	Chairperson's Report for the Period 1 January to 30 September 2025
ENDORSED BY: (for Reports to Council, Committees or Boards)	

General Manager pp Chief Executive

1. SUMMARY

The purpose of this report is to inform the Council of the Rangiora-Ashley Community Board's (the Board) activities for the period 1 January to 30 September 2025 in accordance with the Board's Terms of Reference.

2. RECOMMENDATION

THAT the Council:

(a) **Receives** report No. 250922179987.

(b) **Circulate** a copy of this report to all the Community Boards.

3. BACKGROUND

3.1 It is customary for Community Board Chairpersons to report their Board's progress and achievements to the Council. The report for the previous year, covering the period from 1 January to 31 December 2024 was presented to the Council at its meeting on 4 February 2025.

3.2 The Board comprises 12 members, eight elected Board members and four appointed Ward Councillors. All members took their oath of office at the Board's inaugural meeting on 27 October 2022.

3.3 Following the 2022 Local Government Elections, the Board developed a three-year Community Board Plan. This Plan outlined the Board's objectives, key achievements, and work programme, which is reviewed annually. Actions detailed in this report align directly with the performance expectations set out in the Community Board Plan.

4. ISSUES AND OPTIONS

4.1 Between 1 January and 30 September 2025, eight ordinary Board meetings were held, as no meeting was held in January 2025. were held on the second Wednesday of the month in the Council Chamber at the Rangiora Service Centre. Attendance records show that four members attended all meetings during this period, while the other eight submitted apologies for one or more meetings.

4.2 The Board also attended numerous workshops and briefings which considered a range of matters, including:

- The Council 2025/26 Annual Plan discussions
- The Capital Works Programmes for Roading and Recreation
- The Board's 2025/26 Landscape Budget allocations and updates
- The Board's 2025/26 Board Plan
- Kippenberger Town Entrance
- School Speed Zone Planning
- Rangiora Town Centre Parking Management
- Three Waters Update
- Council Workshop on the South of High Master Plan
- Waimakariri District Plan
- Renovation of Coffee Culture in High Street, Rangiora
- BNZ Building development
- Board Plan

4.3 The Board made three submissions during the period in relation to:

- Waimakariri District Council 2025/26 Annual Plan
- Environment Canterbury's 2025/26 Draft Annual Plan
- The Government's Woodend Bypass toll proposal.

The Board also proceeded with its objection to the proposed quarrying activities and the construction and operation of a Class 3 Managed Fill Landfill at 150, 154, 174 and 176 Quarry Road, Loburn.

4.4 Deputations were heard and progressed in relation to:

- Cust Domain Equestrian Club
- Oxford Football Club
- Northbrook Reserve Food Forest
- Rangiora Community Patrol
- Trees on Elm Drive
- Potential Cust Sawmill
- Pilot Community Shopping Proposal
- Highfield Lane Residents
- Core Boards.

4.5 There were several significant issues for Board consideration, which included:

- Cust Domain football proposal
- Ashley Picnic Grounds Concept Plan
- Rangiora Stormwater Management Plan
- River Road, Rangiora Scheme Design
- Adjustment to Rangiora Ashley Street Carpark
- EV charger upgrades in Rangiora
- Installation of Ben Suter sculpture in Victoria Park
- Core board installation at Victoria Park
- Northbrook Food Forest Rangiora
- Storywalk in Northbrook wetlands
- Tree removal in Elm Street, Rangiora
- Art heritage prints locations in Rangiora
- Various road safety improvements throughout the Rangiora-Ashley Ward, including Charles Upham Drive
- No Stopping restrictions throughout the Rangiora-Ashley Ward
- Installation of several Pedestrian Refuge Islands
- Several road names approved throughout the Rangiora-Ashley Ward
- School Variable Speed Limits
- Landscape Budget projects
- Applications to the Discretionary Grant funding
- Community Board Plan update
- ANZAC Day services.

4.6 Board members attended public meetings and drop-ins, which included:

- North Canterbury Neighbourhood Support strategic planning session
- The Council's and ECan's 2025/26 Annual Plan drop-ins,
- Civil Defence Volunteers BBQ
- Whiterock Quarry Public meetings
- Rangiora Bowling Club meeting
- Volunteer Expo
- Waitangi Day celebrations
- Rangiora Community Patrol meetings
- Public meeting about the Sefton Solar Farm
- Ryman Health meeting about not having a pedestrian crossing
- Emergency Community Hub openings
- Loburn War Memorial opening
- Southbrook Sports Club Working Party meetings
- Opening of the Harlow Village
- Canterbury Family Violence Network meetings
- Rangiora Museum public speaker events
- Violence Free North Canterbury event
- Waimakariri Stronger Communities Conference 2025
- North Canterbury Youth Futures Expo
- Southbrook Development session.

4.7 The Board approved a range of grants to community organisations. In summary, the Board approved 23 applications for funding from 1 January to 31 December 2024 and declined five applications. (The financial year runs from 1 July to 30 June.)

Year	Amount Allocated	Approved	Declined/ Withdrawn	Balance Remaining	Balance Outcomes
2024/25	$9,785 (as at 1 January 2025)	$7,191	One	$2,594 (as at 30 June 2025)	Funds were carried forward to the 2025/26 financial year
2025/26	$17,559 (As at 1 July 2025)	$5,970	Four	$11,589 (as at 30 September 2025	Ongoing until 30 June 2025

4.8 The Board's General Landscaping Budget, allocated by the Council for the 2025/26 financial year, was $29,290. A carryover from the 2024/25 financial year of $28,656, thereby bringing the total of the 2023/24 Landscape Budget to $71,626. The Board is currently focusing on beautifying the Kippenberger Avenue entrance to Rangiora, which will include information on Sir Howard Kippenberger, and staff are working to refine the design.

4.9 The Board's performance expectations link directly to the Council's Community Outcomes. The four key performance expectations are:

(1) Develop and promote the Community Board as a vehicle for local residents to seek assistance and advocacy in accessing council services and consultation processes.
(2) Develop closer links and relationships with key settlements and groups in the Kaiapoi-Woodend Ward and with significant district-wide organisations.
(3) Develop strategies for the Board to become an effective, cohesive voice in representing the community viewpoint at meetings and policy hearings.
(4) To actively participate in council business and the annual budget process to ensure equitable spending across the district whilst being mindful of rates affordability.

4.10 By reviewing the 37 reports referred to the Board and decisions against the above-listed community outcomes for the period of 1 January to 30 September 2025, we believe the following table fairly represents the performance outcomes:

Performance Expectations	(1)	(2)	(3)	(4)
Number of Reports (37)	31	35	26	22

4.11 **Chairperson's Comments:**

4.11.1 The Board had a busy year, with much of its focus on the continued development and improvements required in the Rangiora-Ashley Ward. To achieve good outcomes, the Board worked closely with the Council and its Committees on matters such as reserves, water scheme improvements, and road improvements. The Board also made submissions on the Council and Environment Canterbury's 2025/26 Annual Plans.

4.11.2 The Board's primary role is to manage issues within the Rangiora-Ashley Ward, working with the Council and community to improve the area. The Board, therefore, supports the Council's commitment to:

- Developing the proposed Rangiora Eastern Link Road with NZTA co-funding
- Providing sufficient parking in Rangiora
- The Southbrook Development Plan
- The Rangiora Airfield upgrade
- The River Road upgrades
- Facilitation of the development of an after-hours medical centre in Rangiora.

4.11.3 The Board is pleased with the ongoing work being done at the Millton Reserve and dog park, and a large portion of it is now complete. Elements remaining include some pathways and the installation of a public toilet facility, both of which is anticipated to be completed later this year. The Townsend Road Reserve in Townsend Fields, West Rangiora, is now one of the newest and most popular play spaces in the Waimakariri District, with a large double slide, swings, spinner, rockers, mound and flying fox.

4.11.4 The Board supported the development of a War Memorial at the Loburn Domain. The memorial was constructed in the northern part of the Domain. Loburn School students provided the finishing touches with a planting day. Board members were delighted to attend the first Anzac Day Service held at the newly completed War Memorial in April 2025.

4.11.5 The Board was actively involved with and named the new, well-designed public space and attractive environment in and around Hunnibel Lane. The new laneway created a pleasant pedestrian environment and provided a safe pedestrian connection to new off-street parking, extending the Blake Street carpark. The Board was also pleased about additions to the parking supply around the Rangiora town centre, by including the extension of the Town Hall Carpark into the former Police station site.

4.11.6 Additionally, the Board looks forward to the proposed development of Cenotaph Corner, as the location will provide a focal point for two main roads in Rangiora, which is of strategic significance.

4.11.7 The Board shares the community's concerns about the proposal to construct and operate a Class 3 managed-to-fill Landfill at 150, 154, 174, and 176 Quarry Road, Loburn. The Board, therefore, stands firm in its opposition to the proposal, given the potential impact on water quality, road safety concerns, and the lack of long-term management. Hence, the Board made the Minister of Environment aware of its strong opposition to the application, which is being considered under the Fast-track Approvals Act 2024.

4.11.8 Additionally, the Board is aware of the increased safety challenges that our local communities and businesses face. Therefore, the Board strongly believed that there should be a New Zealand Police presence in the Rangiora Town Centre. The Board similarly supports local organisations committed to improving safety, including the Rangiora Volunteer Fire Brigade, St John's Ambulance Services, Neighbourhood Support North Canterbury, and Rangiora Community Patrol.

4.11.9 The Board believed that food security is an essential part of people's daily lives and integral to New Zealand society. Urban food security is an increasingly urgent priority amid climate change, rising food prices, and growing urban populations. The Board therefore championed the establishment of the Northbrook Food Forest in Rangiora, a community-driven initiative to improve access to food.

4.11.10 The Board continued to advocate for:

- The completion of the Townsend Road culvert
- Addressing the concerns with the Fernside Road/Todds Road intersection
- Implementing road safety options at the Lineside Road crossing with Mulcocks and Bramley Roads
- The upgrading of rural shingle and gravel roads in the Rangiora-Ashley Ward
- The provision of multi-use paths, which was still severely lacking in the rural areas of the ward.

4.11.11 The Board supported all interventions to reduce household and business waste. Not only are the costs of collecting materials for landfills reduced when material is recycled, but also the long-term costs associated with landfills. Recycling extends the life of current landfills. The Board, therefore, supported the upgrade of Southbrook Resource Recovery Park and the development of the Customer Recycling facility.

4.11.12 During the time under review, the Board supported a wide range of local community groups through the Board's discretionary funding grants.

4.11.13 As Chairperson, I wish to acknowledge the Community Board members' effort, dedication, and commitment to the community. I especially want to recognise the work of Board Members Monique Flemming, Murray Clarke, and Ivan Campbell, who retired at the end of the term. The Board also wishes to acknowledge and thank Mayor Gordon and the Councillors for their continued support, and the staff for their assistance.

The Board wishes the incoming Board all the best as they continue to represent and advocate for this remarkable community, initiate projects and plan for the future.

4.13 **Implications for Community Wellbeing**

The issues and options that are the subject of this report have no implications for community wellbeing; however, the report does highlight projects and initiatives that enhance community amenity and wellbeing.

4.14 The Management Team has reviewed this report.

5. COMMUNITY VIEWS

5.1. **Mana Whenua**

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

5.2. **Groups and Organisations**

No other groups and organisations are likely to be affected by or interested in this report's subject matter.

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. However, the Board strives to build and maintain good relationships with the community and, therefore, regularly attends community meetings and events and takes every opportunity to gather feedback.

6. IMPLICATIONS AND RISKS

6.1 **Financial Implications**

The decisions sought by this report have financial implications, as the servicing of Community Boards is met within the Council's existing Governance Budgets.

6.2 **Sustainability and Climate Change Impacts**

The recommendations in this report do not have sustainability and/or climate change impacts.

6.3 **Risk Management**

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

6.4 **Health and Safety**

There are no health and safety issues 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**

Local Government Act 2002 Schedule 7 clause 19 - A Local Authority must hold the meetings that are necessary for the good government of its region or district.

7.3 **Consistency with Community Outcomes**

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

People are friendly and caring, creating a strong sense of community in our District.
There are wide-ranging opportunities for people of different ages and cultures to participate in community life and recreational activities.

7.4 **Authorising Delegations**

Delegation to Community Boards, Part 3, S-DM 1041, Issue 11, as at 25 October 2019.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	GOV-01-11 / 250922179579
REPORT TO:	COUNCIL
DATE OF MEETING:	2 December 2025
AUTHOR(S):	Shona Powell, Chairperson Woodend-Sefton Community Board
SUBJECT:	Chairperson's Report for the period 1 January to 30 September 2025
ENDORSED BY: (for Reports to Council, Committees or Boards)	

General Manager pp Chief Executive

1. SUMMARY

The purpose of this report is to inform the Council of the Woodend-Sefton Community Board's (the Board) activities for the period 1 January to 30 September 2025 in accordance with the Board's Terms of Reference.

2. RECOMMENDATION

THAT the Council:

(a) **Receives** report No. 250922179579.

(b) **Circulates** a copy of this report to all the Community Boards.

3. BACKGROUND

3.1 It is customary for Community Board Chairpersons to annually report their Board's progress and achievements to the Council. The reports for the previous year were presented to the Council at its meeting held on 4 February 2025.

3.2 The Board comprises of seven members, five elected Board members and two appointed Ward Councillors. All members took their oath of office at the Board's inaugural meeting on 27 October 2022.

3.3 Following the 2022 Local Government Elections, the Board developed a three-year Community Board Plan. This Plan outlined the Board's objectives, key achievements, and work programme, which is reviewed annually. Actions detailed in this report align directly with the performance expectations set out in the Community Board Plan.

4. ISSUES AND OPTIONS

4.1 Between 1 January and 30 September 2025, eight ordinary Board meetings were held, as no meeting was held in January 2025. An extraordinary meeting was held in April 2025 to discuss the consultation feedback on the Pegasus Community Centre. The ordinary meetings were held on the second Monday of each month, primarily at the Woodend Community Centre, with the March and April 2025 meetings held at the Sefton Public Hall. Attendance records show that two members attended all meetings during this period, while five submitted apologies for one or more meetings.

4.2 The Board also attended numerous workshops and briefings which considered a range of matters, including:

- Annual Plan discussions for both Environment Canterbury and Waimakariri District Council
- Allocation of the Landscape budget and Greenspace projects
- Relocation of Woodend Beach playground and toilet facilities
- Review of Board funding criteria
- Pegasus Youth Facility
- Surf Lifesaving dates over summer
- Volleyball Court in Waikuku
- Variable speed limits outside schools
- Recreation and Roading Capital Works Programmes
- Waikuku Beach Flood debrief for the May 2025 weather event
- Woodend Pegasus Area Strategy
- Woodend Bypass tolls.

4.3 The Board made the four submissions during the period in relation to:

- Waimakariri District Council 2025/26 Draft Annual Plan
- Environment Canterbury's Draft Annual Plan 2025/26
- New Zealand Transport Agency (NZTA) Speed Review on State Highway 1 between Woodend and the Pines turn-off
- The Government's Woodend Bypass toll proposal.

4.4 The Board heard deputations on the following topics:

- Street Trees in Pounamu Place
- Northside Board Riders
- Surf Lifesaving –changes to patrol dates for the 2025/26 summer season
- Pegasus Youth Space
- Waikuku Beach Flooding.

4.5 There were several significant issues considered by the Board, including:

- Safe pedestrian/cycle access between Pegasus and Ravenswood shopping area, between Pegasus/Ravenswood roundabout and Woodend, and between Woodend and Kaiapoi
- Revised design for the Welcome to Woodend signage
- Toilet Block Mural Woodend Recreational Reserve
- EV Charger Upgrade at the Woodend Community Centre
- Woodend Beach Recreation Facilities Master Plan.
- Waikuku Beach Pond Enhancements
- Waikuku Beach Volleyball Court
- Waikuku Beach Volleyball Court Location
- Waikuku Beach Community Facilities Development Plan
- Community Consultation on Waikuku Beach Master Plan
- Surf Life Saving Update
- Pegasus Youth Space Options
- Pegasus Youth Space – approval of activities and locations
- Pegasus Community Centre Consultation Feedback
- Pounamu Place/Tuka Road Street Trees removal
- Roading and Recreation Capital Works Programme
- School Variable Speed Limits
- ANZAC Day Services
- Allocations of Board funding and landscape budget
- Various Discretionary Grant funding applications.

4.6 Board members attended several public meetings and Drop In's, which included:

- Pegasus Community Centre – proposed design
- Route options for Eastern Link Road, Rangiora
- Annual Plan public consultations
- Hikurangi – tsunami risk meetings
- Waikuku Beach Community Facilities Development Plan drop-ins on
- AGMs for Resident Groups/Associations and the Woodpecker Trust
- District Plan drop-in
- Monthly Community Morning Teas in Pegasus and Ravenswood.

4.7 The Board approved a range of grants to community organisations. In summary, the Board received five applications for funding during the period 1 January to 30 September 2025. (The financial year runs from 1 July to 30 June).

Year	Amount Allocated	Approved	Declined	Balance Remaining	Balance Outcomes
2024/25	$3,405 (as at 1 January 2025)	$1,050	0	$2,355 (As at 30 June 2025)	Funds were not carried forward to the 2025/26 financial year
2025/26	$9,855 (as at 1 July 2025)	$1,900	0	$7,955 (as at 30 September 2025)	Ongoing until June 2026

4.8 The Board received an allocation of $14,640 from the Council for its 2025/26 Landscape budget. Currently, the following projects are being progressed:

- Woodend Beach entrance sign – on hold due to funding shortfall and decision that the Welcome to Woodend sign on the Rangiora to Woodend entrance was a priority.
- Welcome to Woodend signage - Rangiora to Woodend entrance sign in progress, waiting for Rūnanga input on the design. A draft has been received, and staff are currently awaiting responses to their feedback. The South and North entrance signs were put on hold until after the bypass is completed, and due to budget constraints.
- Information signage on the Owen Stalker family for the park – Complete.
- Planting around the wastewater unit at Sefton Domain – this is a special operations project and was passed onto Ishbeal Clark.
- Installation of shelter in the Gladstone dog park – Complete.

4.9 The Board's performance expectations link directly to the Council's Community Outcomes. The four key performance expectations are:

(1) Develop and promote the Community Board as a vehicle for local residents to seek assistance and advocacy in accessing council services and consultation processes.
(2) Develop closer links and relationships with key settlements and groups in the Woodend-Sefton Area, as well as with significant district-wide organisations.
(3) Develop strategies for the Board to become a compelling, cohesive voice in representing the community viewpoint at meetings and policy hearings.
(4) To actively participate in council business and the annual budget process to ensure equitable spending across the district whilst being mindful of rates affordability.

4.10 By reviewing the 27 reports referred to the Board and decisions against the above-listed community outcomes for the period of 1 January to 30 September 2025, we believe the following table fairly represents the performance outcomes:

Performance Expectations	(1)	(2)	(3)	(4)
Number of Reports (27)	25	25	19	20

4.11 Chairperson's Comments

4.11.1 During 2025, the continuing focus of the Board has been on the needs of the area with the ongoing rapid growth and working with staff on progressing projects, some of which have been planned for some time.

4.11.2 The Board is relieved and pleased that work will start shortly on the shared path alongside SH1 between Chinnerys Road in Woodend and the existing path from Ravenswood, as this has been a concern for many years. Drainage is an ongoing issue, and the work of Council staff has been key to the improvements completed and those planned. Also, having contingency plans in place when needed, and working proactively with Environment Canterbury staff, will all make a real difference during future rain events.

4.11.3 Looking forward, now that NZTA have commenced design work for the Woodend Bypass, and the development of a new Woodend Pegasus Area Strategy, which was delayed, will be an essential process to assist planning for the future. The proposed tolling, if approved by the Government, will play a role in this planning as the alternate route through Woodend will have much higher traffic volumes than without tolling.

4.11.4 Progress on the new Community Facility in Pegasus, along with the Youth Space, is much anticipated by the community, and good progress was made this year on both. Hopefully, 2026 will see both finally completed. Another project is the Woodend Beach Domain, currently out for consultation, which will include a new coastal play space, new toilets with change facilities, and a revamped car park. This has also had several delays, and the community are looking forward to having their say and work starting.

4.11.5 A number of projects were completed this year, and good progress was made on other projects, which the incoming Board will take over. Summary of projects completed, or decisions made:

- Interactive signage installed at Owen Stalker Park in Woodend, which includes the history of Owen Stalker in Woodend
- Seats installed along Bob Robertson Drive - two funded by the Board and two by Ravenswood Developments
- After advocacy to Environment Canterbury, buses now deviate into the Ravenswood Commercial area.
- Ashley/Rakahuri Estuary viewing platform built by Ashley Rakahuri Rivercare Group using a local's bequest
- Paid surf lifesaving patrol dates will be extended again during the summer season at Woodend and Pegasus Beaches
- Project to enhance the Waikuku Beach pond, including removing weeds and planting native plants. This work will continue in stages
- Shelter built in the large dog park at Gladstone Park in partnership with Kaiapoi Menz Shed
- Advocacy around tolling of Woodend Bypass with Board submission lodged opposing the proposed tolling
- Progress on shared path alongside SH1 between Ravenswood and Chinnerys Road in Woodend, with work hopefully starting in October
- Beach matting to be installed at Waikuku Beach to allow accessibility for the disabled
- Location of the community-funded beach volleyball court in Waikuku Beach has been approved on the north side of the carpark
- Students at Woodend School will work with an artist on a mural on the toilet block at Woodend Recreational Reserve/Owen Stalker Park.
- Pegasus Community Centre – public consultation held on proposed design, design finalised, resource consent granted, expressions of interest evaluated, and tenders closed with a sod turning ceremony taking place on 9 October 2025.

4.11.6 Summary of ongoing projects for the incoming Board to progress further:

- Consultation on youth space in Pegasus – significant response from the public and the youth. The Board's decision was three different elements, with locations to be finalised by the incoming Board
- Woodend Beach Domain - proposed design for the new toilets and changing facilities, car park revamp and an exciting new coastal dune play space along the beach access path. This is out for consultation, closing 8th October 2025
- Design work continuing on new 'Welcome to Woodend Beach' sign
- Installing a new 'Welcome to Woodend' sign on Rangiora Woodend Road only. Other Woodend welcome signs are on hold because of the Woodend Bypass
- Woodend Pegasus Area Plan – there has been some preparation work on developing a plan for the future
- Waikuku Beach - recent consultation on facilities, access and carparking at the beach showed locals wanted to prioritise new accessible toilets and change facilities, and drainage work on the carpark. As the toilets and change facilities require funding, staff will request that this be brought forward from 2052 into next year's draft annual plan for Council's consideration.

4.11.7 As Chair, I would like to acknowledge the staff for their assistance and work, including the Governance Team for its support. I also wish to acknowledge the Community Board members' effort, dedication, and commitment to the community. The Board also thanks Mayor Gordon and the Councillors for their continued support.

4.11.8 The Board wishes the incoming Board all the best as they continue to represent and advocate for this amazing community, seeing projects started through to completion, developing new projects, and planning for the future.

4.12 **Implications for Community Wellbeing**

There are no implications for community wellbeing from the issues and options that are the subject of this report; however, the report highlights projects and initiatives that enhance community amenity and wellbeing.

4.13 The Management Team has reviewed this report.

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.

5.2 Groups and Organisations

There are no other groups or organisations which are likely to be affected by, or to have an interest in, the subject matter of this report.

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. However, the Board strives to build and maintain good relationships with the community and Board members; therefore, it regularly attends community meetings and events and takes every opportunity to gather feedback.

6 IMPLICATIONS AND RISKS

6.1 Financial Implications

The decisions sought by this report have financial implications, as the servicing of Community Boards is met within Council's existing Governance Budgets.

6.2 Sustainability and Climate Change Impacts

The recommendations in this report do not have sustainability and/or climate change impacts.

6.3 Risk Management

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

6.4 Health and Safety

There are no health and safety issues 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

Local Government Act 2002 Schedule 7 clause 19 - A Local Authority must hold the meetings that are necessary for the good government of its region or district.

7.3 Consistency with Community Outcomes

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

People are friendly and caring, creating a strong sense of community in our District.
There are wide-ranging opportunities for people of different ages and cultures to participate in community life and recreational activities.

7.4 Authorising Delegations

Delegation to Community Boards, Part 3, S-DM 1041, Issue 10, as at 25 October 2019.

WAIMAKARIRI DISTRICT COUNCIL

REPORT FOR INFORMATION

FILE NO and TRIM NO:	EXC-57 / 251118219225
REPORT TO:	COUNCIL
DATE OF MEETING:	2nd December 2025
AUTHOR(S):	Jeff Millward – Chief Executive
SUBJECT:	Health, Safety and Wellbeing Report – October 2025 to current
ENDORSED BY: (for Reports to Council, Committees or Boards)	Department Manager / Chief Executive

1. Summary

1.1. This report provides an update to the Council on Health, Safety and Wellbeing (HS&W) matters between October 2025 and November 2025. The dashboard reporting in the appendices cover trends between October 2024 and November 2025.

1.2. There were 14 incidents which occurred from mid-October 2025 and mid-November 2025 which resulted in 2 hours lost time to the organisation. Flamingo Scooter did not report any incidents within this period. Rangiora Airfield did not report any incidents within this period.

1.3. Section 4 of the report provides details on the following areas:

4.1 Incidents, Accidents & Hazards
4.2 Fatigue Policy
4.3 Tōtika Prequalification Scheme

Attachments:

i. Appendix A: Incidents, Accidents and Near-misses
ii. Appendix B: Health, Safety and Wellbeing Dashboard Reports.
iii. Appendix C: Contractor Health and Safety Capability Pre-qualification Assessment (drawn from the Site Wise database)

2. Recommendation

THAT the Council:

(a) **Receives** Report No 251118219225

(b) **Notes** that there were no notifiable incidents this month. The organisation is, so far as is reasonably practicable, compliant with the duties of a person conducting a business or undertaking (PCBU) as required by the Health and Safety at work Act 2015.

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

3. Background

3.1. The Health and Safety at Work Act 2015 requires that Officers must exercise due diligence to make sure that the organisation complies with its health and safety duties.

3.2. An officer under the Health and Safety at Work Act 2015 is a person who occupies a specified position or who occupies a position that allows them to exercise a significant influence over the management of the business or undertaking. Councillors and the Chief Executive are considered to be Officers of the Waimakariri District Council.

4. Issues and Options

4.1. Incidents, Accidents & Hazards

4.1.1. Mid-October 2025 to mid- November 2025 shows themes in injuries and Vehicle & Property Damage.

4.1.2. The injuries are comprised of day-to-day tasks/activities, where staff have obtained minor injuries from task based activities. Members of the public have also been included in this report. 2 hours lost time recorded for this period due to Dr visits immediately after incidents.

4.1.3. Property and vehicle damage incidents reported in this period vary between employee and contractor. Incident investigations have been shared and learnings have been undertaken.

4.1.4. Adverse Interactions have consisted of threatening behaviour from members of the public via email. These have been notified to the police. We continue to involve the Police as necessary to ensure the safety and wellbeing of our staff.

4.1.5. Rangiora Airfield did not report any incidents for this period. Information is being provided to the CAANZ for a safety concern as per previous report.

4.1.6. No Flamingo Scooter incidents for this reporting period

4.1.7. All incidents are either closed with mitigations or currently under investigation. Key learnings have been shared with teams. Reporting of all incident occurrences has been consistent with staff and incident information has been thorough. Communication with contractors and members of the public where applicable.

4.2. Fatigue Process to Policy conversion

4.2.1. Waimakariri District Council recognises that fatigue affects a person's health and wellbeing, increases the chance of illness and workplace injuries occurring, and reduces performance and productivity within the workplace.

4.2.2. The purpose of our current process is to highlight the risks and effects of worker fatigue, the shared responsibility to manage it appropriately, and the preventative actions that should be planned and taken to minimise associated risks.

4.2.3. The process applies to all Waimakariri District Council workers and volunteers whilst at the workplace or whilst carrying out activities on behalf of WDC, including (but not limited to):

- Workers who undertake significant driving as part of their roles.
- Workers who undertake significant travel as part of their roles.
- Workers who work at host employers' premises and other sites, particularly remote sites requiring lengthy drives.
- Workers who support CDEM and EOC
- Workers who work on call rosters

4.2.4. Due to various Emergency Control situations and staff being on call, the Fatigue Process and accompanying guidelines are being reviewed to ensure all variations of extended work patterns and circumstances are managed in an appropriate manner.

4.2.5. The outcome of the review is a preference to convert the current process into a WDC Fatigue Management Policy. The review process is underway.

4.3. Tōtika Prequalification Scheme

4.3.1. WDC is now a member of Tōtika as a 'buyer' to ensure our contractor procurement process has more opportunity for robust Health & Safey systems when engaging contractors.

4.3.2. Pre-qualification is a procurement pre-supplier selection process that provides buyers of services assurance that those suppliers of services permitted to tender for work have a suitable and sufficient H&S management programme scaled for the type of business they are and that they are working to continuously improve.

4.3.3. Supplier/Contractor prequalification benefits include risk mitigation by ensuring financial stability and competence, cost and time savings by streamlining the bidding process and avoiding unreliable vendors, and improved efficiency through standardised, centralised data. It also leads to better quality outcomes, increased compliance, and stronger supplier relationships.

4.3.4. Tōtika is the preferred prequal for large construction and civil contractors. Fast becoming the choice of New Zealand regional councils.

4.3.5. It creates a fair and equitable scheme with the objective that suppliers only need to pre-qualify once instead of duplicating effort for each new client and opportunity

4.3.6. Categories consist of:

- Category 1 Sole-Trader, (small business, low risk)
- Category 2 (medium business, or higher risk)
- Category 3 (large business, or very high risk).
- Validity – 1 or 2 years, depending on category.

4.3.7. WDC continue to utilise +IMPAC Prequal and Sitewise as prequal options. A project is underway to streamline the prequalification process.

5. Implications for Community Wellbeing

5.1.1. There are no implications for community wellbeing by the issues and options that are the subject matter of this report.

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

6. Community Views

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

6.1.2. **Groups and Organisations**
There are no groups and organisations likely to be affected by, or to have an interest in the subject matter of this report.

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

7. Other Implications and Risk Management

7.1. Financial Implications

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

7.2. Sustainability and Climate Change Impacts

The recommendations in this report do not have sustainability and/or climate change impacts.

7.3. Risk Management

The organisation has reviewed its health and safety risk and developed an action plan. Failure to address these risks could result in incidents, accidents or other physical or psychological harm to staff or the public.

The regular review of risks is an essential part of good safety leadership.

7.4. Health and Safety

There are health and safety risks arising from the adoption/implementation of the recommendations in this report. Continuous improvement, monitoring, and reporting of Health and Safety activities are a key focus of the health and safety management system.

8. Context

8.1. Consistency with Policy

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

8.2. Authorising Legislation

The key legislation is the Health and Safety at Work Act 2015.

The Council has a number of Human Resources policies, including those related to Health and Safety at Work.

The Council has an obligation under the Local Government Act to be a good employer.

8.3. Consistency with Community Outcomes

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

- There is a safe environment for all.
- Harm to people from natural and man-made hazards is minimised.
- Our District has the capacity and resilience to quickly recover from natural disasters and adapt to the effects of climate change.

The Health, Safety and Wellbeing of the organisation, its employees and volunteers ensures that Community Outcomes are delivered in a manner which is legislatively compliant and culturally aligned to our organisational principles.

8.4. Authorising Delegations

An officer under the Health and Safety at Work Act 2015 is a person who occupies a specified position or who occupies a position that allows them to exercise a significant influence over the management of the business or undertaking. Councillors and Chief Executive are considered to be the Officers of WDC.

Appendix A
WDC Incident Reports

Date	Event Description	Incident Type	Person Type	Outcome & Response
18/11/2025	A contractor was working on site when they stood on a timber rail on a bridge, which has snapped and the person has fallen to the ground below. An ambulance was called.	Injury	Contractor	Ambulance attended. Waiting on further details and incident investigation report from the Contractor.
18/11/2025	A staff member tripped on stairs while at a supplier premises. They have a broken right arm which is now in a cast and has a minor fracture to their left ring finger and a large bump on their head.	Injury	Employee	Immediate medical attention was administered via by-standers and ambulance upon arrival. Ongoing care and support is being provided. After release from hospital emergency unit.
13/11/2025	A digger hit a truck while tracking on site. Use of hire truck and digger while tracking on site the digger hit the truck damaged a side panel.	Property or Vehicle Damage	Employee	Very minor damage to the digger with a slight dent to one panel. No damage to the truck. No one was injured.
10/11/2025	Indicator plug broke off trailer. A staff member left site with the trailer fully secured. When detaching at the main yard they noticed that the indicator plug had been ripped out.	Property or Vehicle Damage	Employee	Under investigation
6/11/2025	A trespassed member of the public trespassing by sitting outside Kaiapoi library.	Other	Member of the Public	Police notified to manage the member of public. No adverse interaction.
6/11/2025	A staff member received a small wound above their eye from a PE pipe flicking out of fitting when they were setting up a weld. This was due to the pipe being under tension.	Injury	Employee	No medical treatment needed. Basic first aid and shared learnings with the team.
4/11/2025	While a staff member was working around a caravan dumping station, a member of the public emptied their sewer from their camper/caravan and spilled some of the	Other	Employee	Staff member showered and changed immediately. No further action was required.

	liquid/effluent on the staff members work gear, splashing further to their legs and arms. The effluent cassette did not have a lid on it.			
3/11/2025	A staff member left a work site with unsecured tools and equipment on a trailer. This was discovered by CCTV footage.	Near Miss	Employee	Under Investigation.
3/11/2025	A staff member was trenching with the 2t digger. Possible services were marked by the service locator. Cat 4 locator was also used before digging, drawing no signal for power or telecom. A spotter was used. Possible empty duct with no signal with locator directly on duct.	Other	Employee	Redundant services were hit as they were not picked up by the locator. No action required as they are redundant No further action is required.
30/10/2025	While using the Ditch Witch Hydro Vac, the suction hose on the machine came off and struck an employee in the eye, causing a small cut on his eye lid. The suction hose has some tension and flicks out under pressure.	Injury	Employee	Staff member presented to the GP for a check-up. No first aid required. The staff member returned to work soon after. Investigation into the safe use of this equipment are ongoing.
29/10/2025	When opening a sealed over valve a foreign object flew into a staff members eye. Staff member was using a crowbar to break up asphalt. A small piece flicked up under their safety glasses and scratched their eye.	Ergonomic Pain & Discomfort	Employee	Staff member presented to the GP for a check-up. Eye cleaned and medication provided. The staff member returned to work soon after.
30/10/2025	The contractor operator was trenching. They believed to have passed the asset that had been marked out with paint and on the very last pass with the blade, caught the wire/cable.	Property or Vehicle Damage	Employee	Under investigation
29/10/2025	A staff member was cleaning up left over spoil and drove over a previously poured drain. There was a small, nodded piece of concrete sticking out and as they drove it the weight of the vehicle left a small crack.	Property or Vehicle Damage	Contractor	Under investigation

23/10/2025	During a weather event a tree fell on a house at the Ashley Gorge Holiday Park.	Property or Vehicle Damage	Member of the Public	The owner closed the lower reserve due to the high winds and tree/debris damage and advised that the public of the closure of the Ashley Gorge Reserve. There has been an inspection of the surrounding trees to ensure they won't recur in the future.
17/10/2025	Youth caught climbing on the Kaiapoi Library building by the cleaners. No footage was captured on the CCTV.	Other	Member of the Public	Leadership team informed. Unable to identify youths.
21/10/2025	A staff member has received threatening letters from a member of the public.	Adverse Interaction	Employee	Police have been informed.

Airfield Incident Reports – Nil to report this month

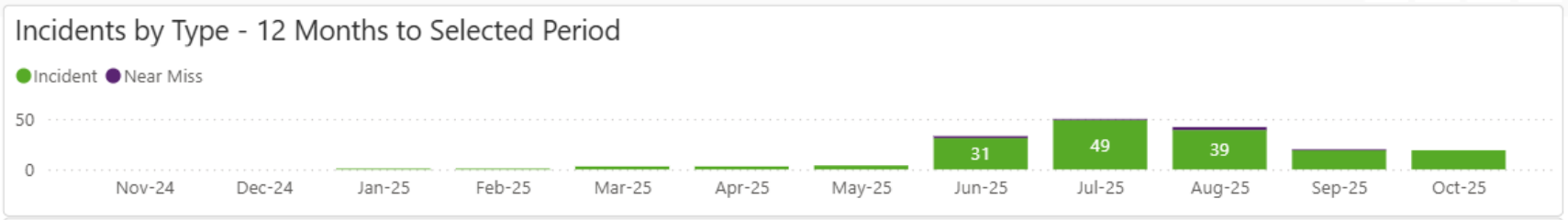
Flamingo Scooter Incident Reports: Nil to report this month.

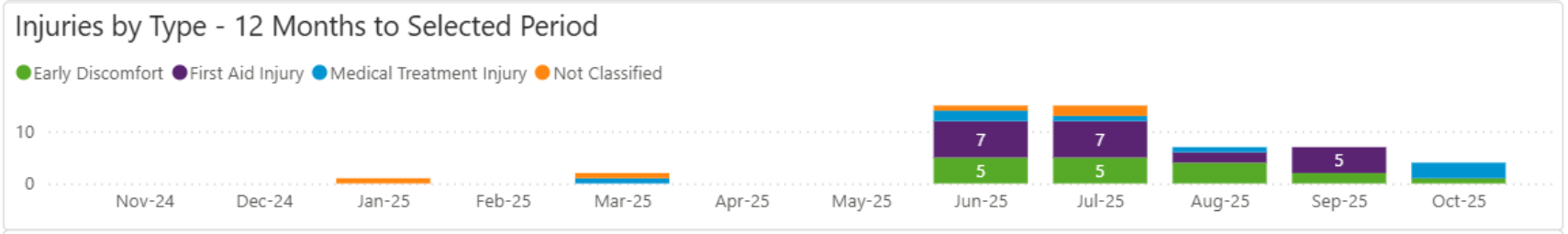
Safety Inspections (Workplace Walkarounds)	• Workplace Walkarounds next due December 2025
Training Delivered	• First Aid training 5 November 2025 (20 staff) • First Aid training 11 November 2025 (1 staff) • Pool Lifeguard Practicing Certificate September-October 2025 (12 aquatics staff)
Scheduled Training	• Height Safety Intermediate Refresher 19 November 2025 (3 staff) • Height Safety Intermediate Full 18 & 19 November 2025 (1 staff) • Confined Space & Atmospheric Testing Full 20 & 21 November (1 staff) • Confined Space & Atmospheric Testing Refresher 21 November (1 staff) • Height Safety Refresher 24 November 2025 (3 staff)

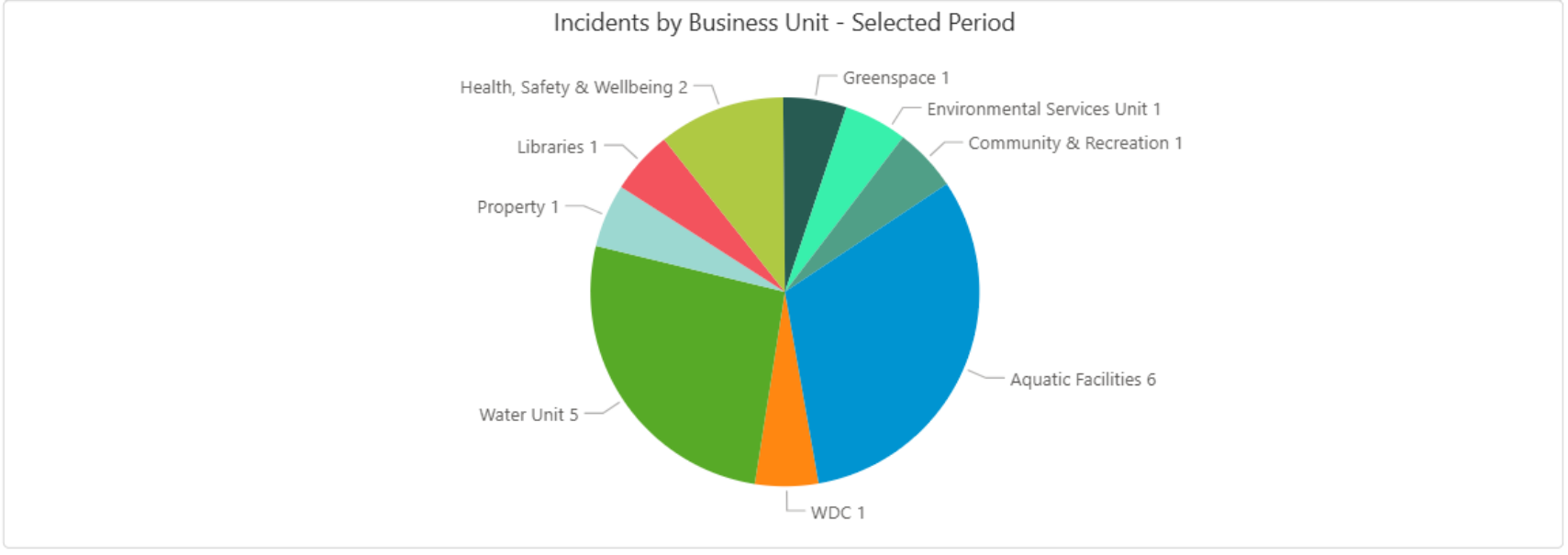
Appendix B

(All graphs in Appendix B show information recorded in the new Health and Safety Management System to date)

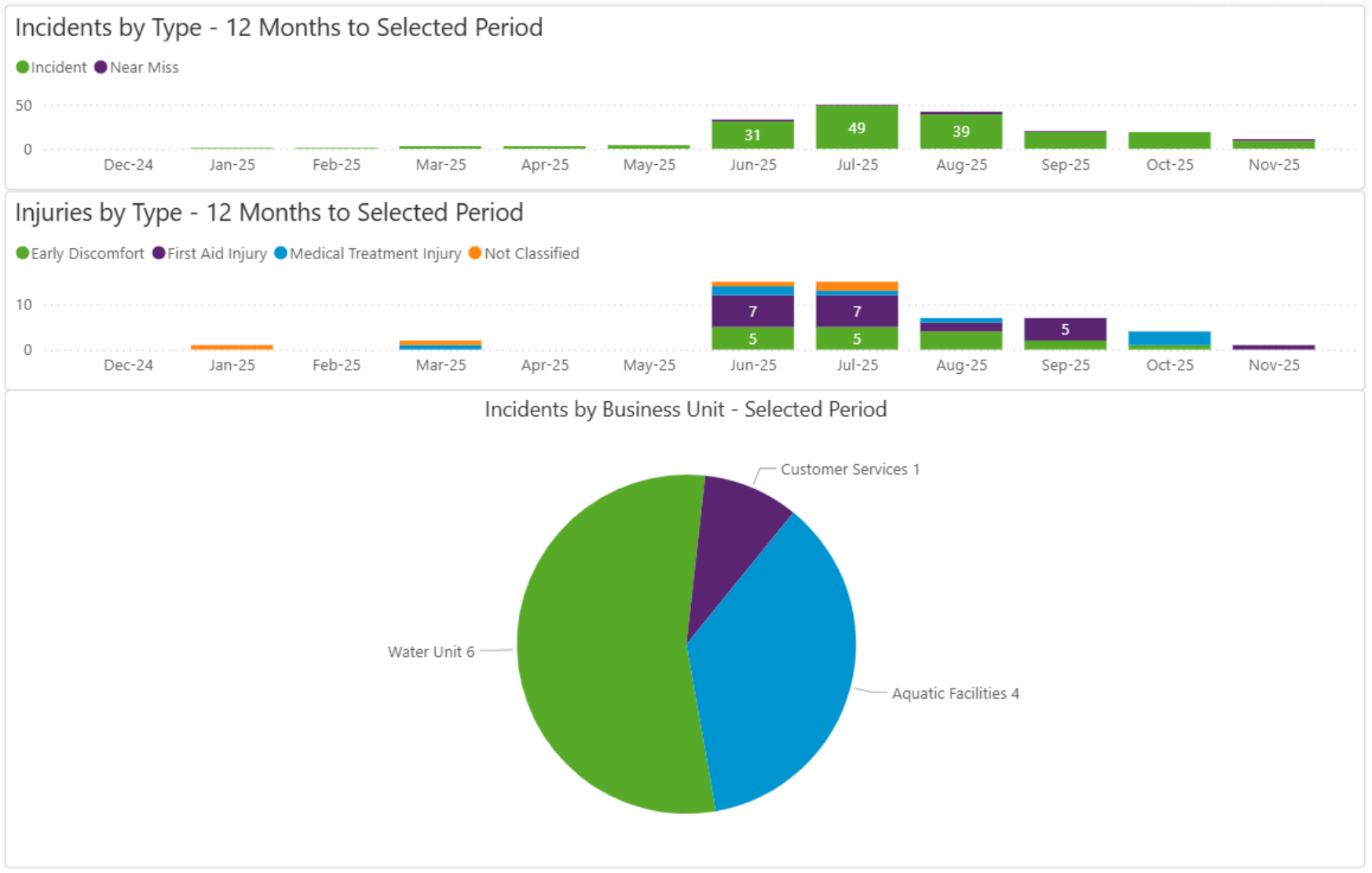
October 2025:

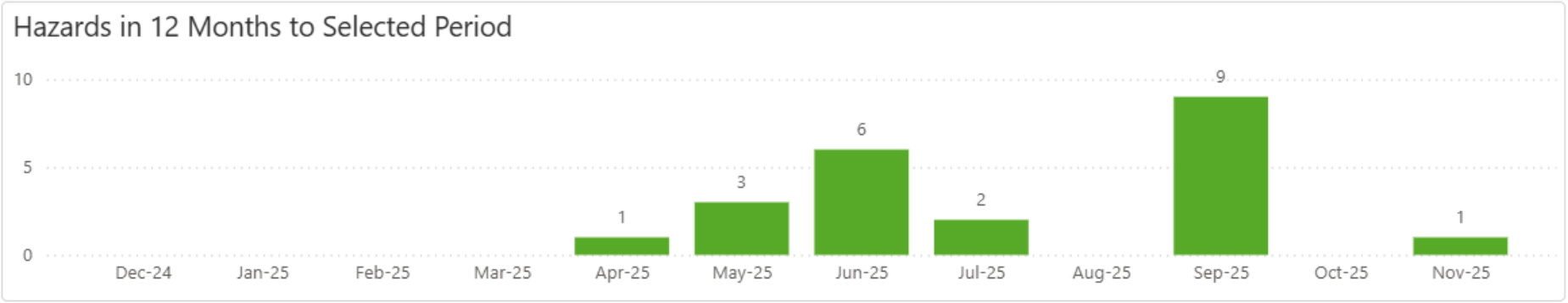


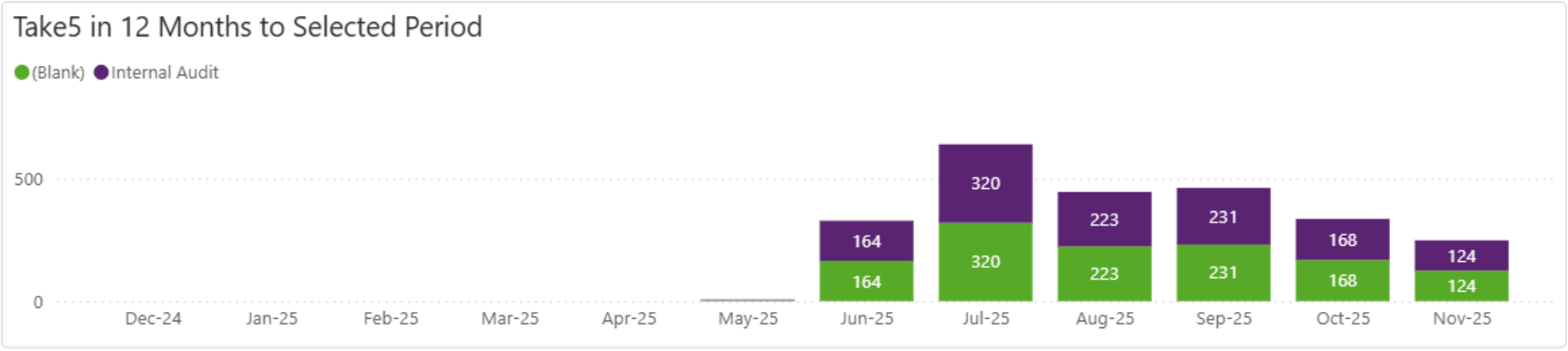




Current month – November 2025:




Hazards in 12 Months to Selected Period
10
5
0
1
3
6
2
9
1
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25
Nov-25


Take5 in 12 Months to Selected Period
(Blank)
Internal Audit
500
0
164
164
320
320
223
223
231
231
168
168
124
124
Dec-24
Jan-25
Feb-25
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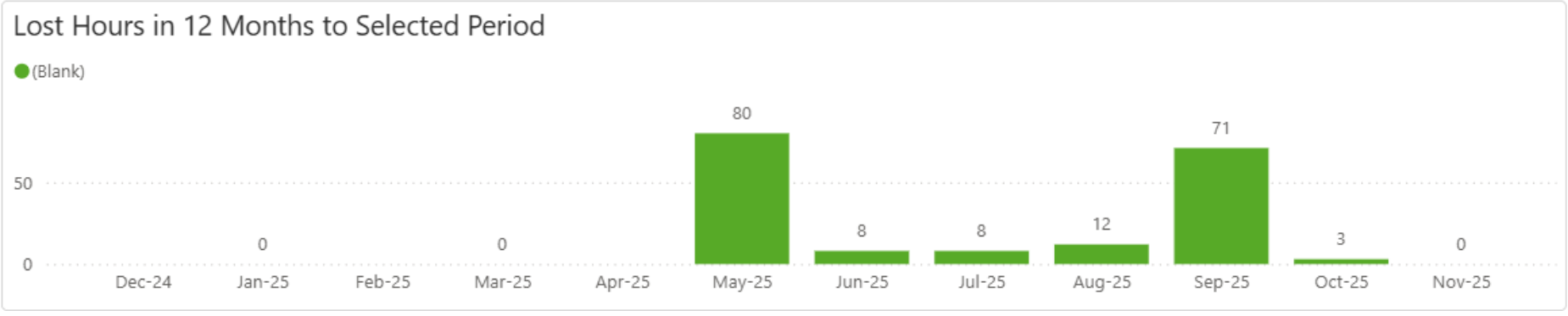
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25
Nov-25


Lost Hours in 12 Months to Selected Period
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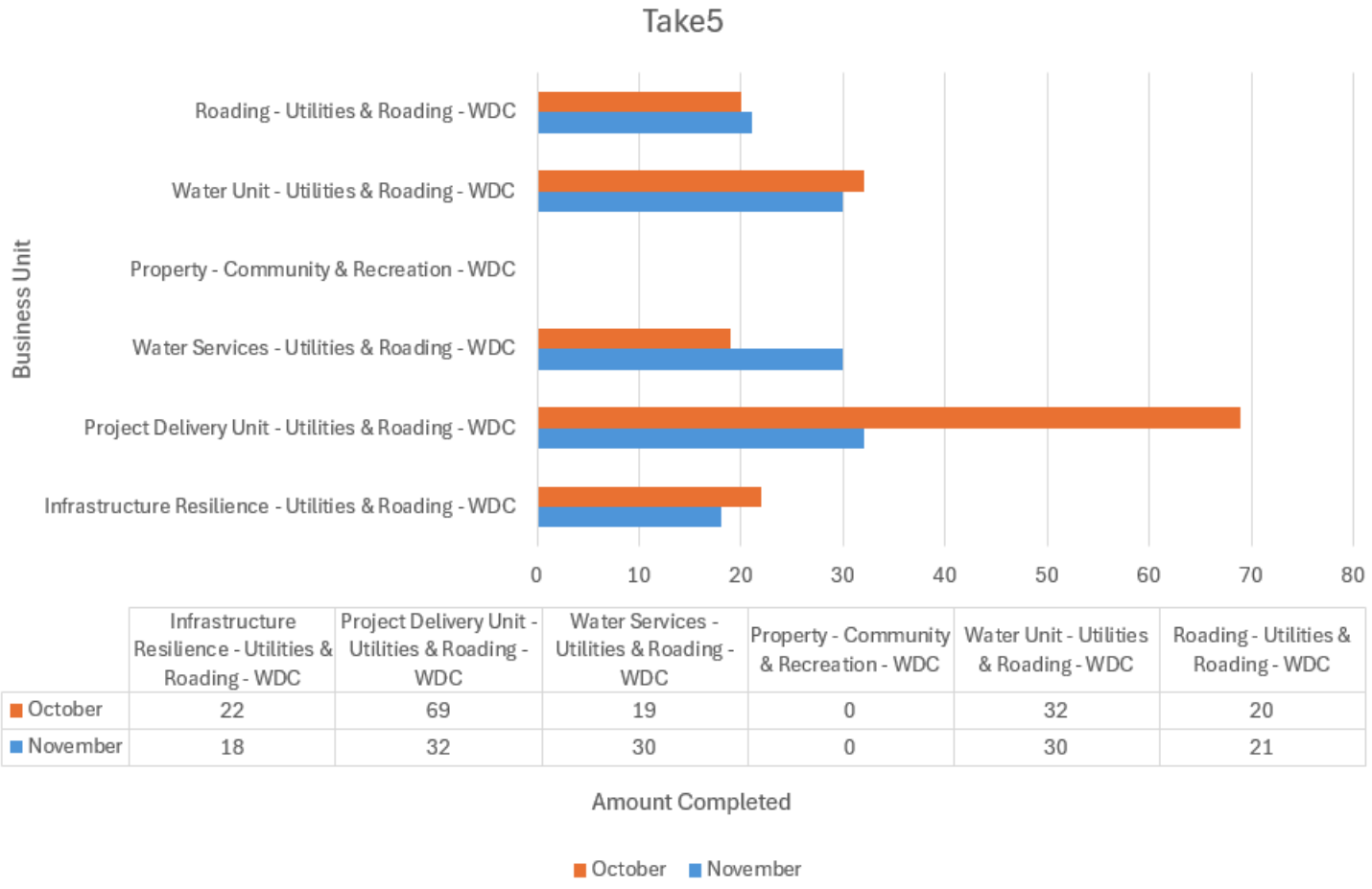
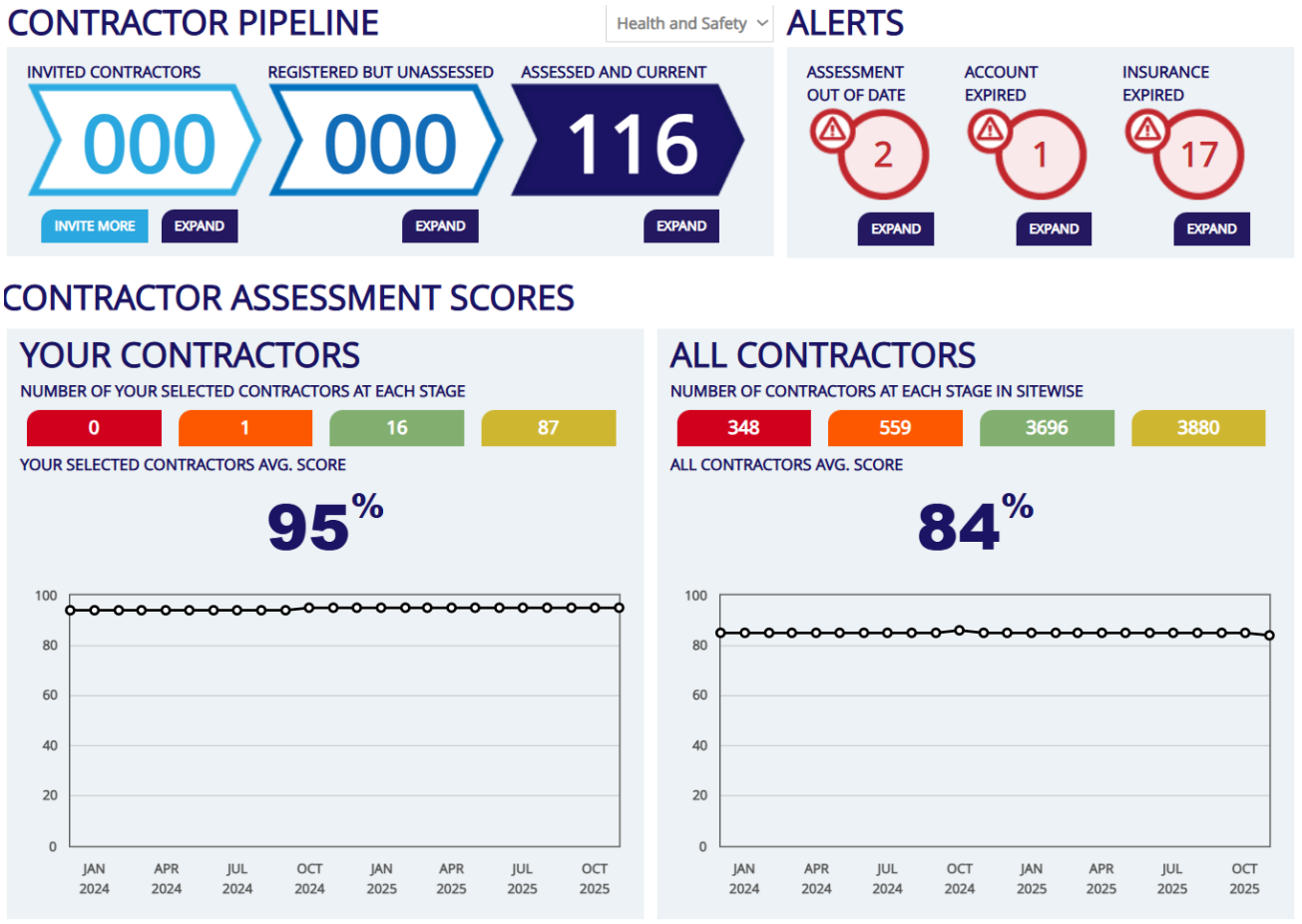
50
0
0
0
80
8
8
12
71
3
0
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
Oct-25
Nov-25



	Infrastructure Resilience - Utilities & Roading - WDC	Project Delivery Unit - Utilities & Roading - WDC	Water Services - Utilities & Roading - WDC	Property - Community & Recreation - WDC	Water Unit - Utilities & Roading - WDC	Roading - Utilities & Roading - WDC
October	22	69	19	0	32	20
November	18	32	30	0	30	21

Appendix C



Sitewise assessment grading below:

Above is the current status of our preferred contractor database held within SiteWise.
Alerts are the contractors currently out of assessment date, expired and their insurance has expired. We do not engage these contractors until they are reassessed by SiteWise. SiteWise issue reminders as well as the HS&W team once a month until they have updated them.
"YOUR CONTRACTORS" is referring to our preferred contractor list. "ALL CONTRACTORS" is referring to the full contractor list.
"INVITED CONTRACTORS "is referring to the number of new contractors we have invited and as preferred this past month. "REGISTERED BUT UNASSESSED" is referring to the contractors that have applied to Sitewise but have not submitted documentation for assessment yet.

MINUTES OF THE INAUGURAL MEETING OF THE RANGIORA-ASHLEY COMMUNITY BOARD HELD IN THE COUNCIL CHAMBERS, RANGIORA SERVICE CENTRE, 215 HIGH STREET, RANGIORA, ON 29 OCTOBER 2025 AT 11.30AM.

PRESENT

L McClure (Chairperson), J Gerard (Deputy Chairperson), K Barnett, R Brine, W Doody, A Geeves, J Goldsworthy, D Hawkins, D Lundy, B McLaren, B Robinson, and J Ward.

IN ATTENDANCE

Mayor D Gordon, Deputy Mayor P Redmond.

J Millward (Chief Executive), S Hart (General Manager Strategy, Engagement and Economic Development), T Kunkel (Governance Team Leader), K Rabe (Governance Advisor), C Fowler-Jenkins (Governance Support Officer) and A Connor (Governance Support Officer).

There were two members of the public present.

At the commencement of the meeting, the Chief Executive, J Millward, took the Chair and welcomed the newly elected Board members to the inaugural meeting of the fourth term of the Rangiora-Ashley Community Board.

1. APOLOGIES

Nil.

2. CONFLICTS OF INTEREST

There were no conflicts of interest declared.

3. BOARD MEMBERS' DECLARATIONS

The Chief Executive invited elected members to read and sign their declarations as required in terms of Schedule 7 of the Local Government Act, 2002, which was witnessed and signed by the Chief Executive.

Declaration by Community Board members:

I, (name), declare that I will faithfully and impartially, and according to the best of my skill and judgement, execute and perform, in the best interests of the Woodend-Sefton community, the powers, authorities, and duties vested in or imposed upon me as Member of the Woodend-Sefton Community Board by virtue of the Local Government Act 2002, the Local Government Official Information and Meetings Act 1987, or any other Act.

Dated at: Rangiora on 29 October 2025

Signature:

Signed in the presence of:

[J Millward]

The Community Board members who read the oath were Kirstyn Barnett, Robbie Brine, Wendy Doody, Alan Geeves, Jim Gerard, Jason Goldsworthy, Diana Hawkins, Duncan Lundy, Liz McClure, Bruce McLaren, Brent Robinson and Joan Ward.

4. REPORTS

4.1 **Appointment of Chairperson and Deputy Chairperson** – T Kunkel (Governance Team Leader

J Millward introduced the report and explained the process for electing the Chairperson and Deputy Chairperson. He then called for nominations for Chairperson.

There were no questions from elected members.

Moved: J Gerard Seconded: K Barnett

THAT the Rangiora-Ashley Community Board:

(a) **Receives** Report No: 250702119838.

(b) **Resolves** to call for nominations of Chairperson and Deputy Chairperson and uses System (A) for voting in the event of more than one member being nominated.

(c) **Appoints** Board Member L McClure. as Chairperson of the Rangiora-Ashley Community Board to take immediate effect from 29 October 2025 until the end of the 2025-28 triennial term in October 2028.

(d) **Notes** that the remuneration of the Chairperson will be appropriately adjusted as from 30 October 2025.

CARRIED

The Chief Executive vacated the Chair in favour of the elected Chairperson, L McClure.

L McClure thanked the Board for electing her as Chairperson, whereafter she called for nominations for the position of Deputy Chairperson.

Moved: J Ward Seconded: R Brine

(e) **Appoints** Board Member J Gerard as Deputy Chairperson of the Rangiora-Ashley Community Board to take immediate effect from 29 October 2025 until the end of the 2025-28 triennial term in October 2028.

CARRIED

Moved: D Hawkins Seconded: A Geeves

(e) **Appoints** Board Member Kirstyn Barnett as Deputy Chairperson of the Rangiora-Ashley Community Board to take immediate effect from 29 October 2025 until the end of the 2025-28 triennial term in October 2028.

LOST

The Chairperson called for a vote which resulted in J Gerard being elected as Deputy Chairperson.

4.2 **Local Government Act - First Meeting following the Triennial General Election Requirements** – J Millward (Chief Executive)

T Kunkel noted that report outlined legislation which members need to be aware of. Members have been provided with copies of various legislation that may have the most impact on Community Boards as part of their induction packs.

There were no questions from elected members.

Moved: R Brine Seconded: W Doody

THAT the Rangiora-Ashley Community Board:

(a) **Receives** report No. 250805143965.

(b) **Receives** legislative material that has been circulated.

CARRIED

4.3 **Elected Member Code of Conduct and Standing Orders** – Thea Kunkel (Governance Team Leader)

T Kunkel spoke to the report, noting that under legislation, the Board was required to have a Code of Conduct and Standing Orders in place from its inaugural meeting. The Standing Orders provided guidance for the conduct of Board meetings. The Council's Standing Orders had been adapted to better meet the needs of Community Boards.

K Barnett questioned when the Boards next chance to review the Standing Orders would be. T Kunkel advised that the Government, through the Local Government (Systems Improvements) Amendment Bill, was proposing to introduce standardised Codes of Conduct and Standing Orders for all councils. As a result, it was anticipated that the Board's Code of Conduct and Standing Orders would need to be reviewed once further details of the proposed Bill become available early in the new year.

Moved: J Gerard Seconded: J Ward

THAT the Rangiora-Ashley Community Board:

(a) **Receives** report No 250805143912.

(b) **Receives** the 2025 Elected Members Code of Conduct (Trim 230918145779).

(c) **Adopts** the 2025 Orders Standing Orders for Community Boards (Trim 251013193983), effective from 29 October 2025.

4.4 **Rangiora-Ashley Community Board's meeting dates from October 2025 to December 2026** – Thea Kunkel (Governance Team Leader)

T Kunkel introduced the report and took it as read.

There were no questions from elected members.

Moved: K Barnett Seconded: D Lundy

THAT the Rangiora-Ashley Community Board:

(a) **Receives** report No. 250703120633.

(b) **Resolves** to hold Community Board meetings at the Council Chambers at the Rangiora Service Centre, 215 High Street, Rangiora, commencing at 7pm, on the following dates:

- 12 November 2025
- 10 December 2025
- 11 February 2026
- 11 March 2026
- 8 April 2026

- 13 May 2026
- 10 June 2026
- 8 July 2026
- 12 August 2026
- 9 September 2026
- 14 October 2026
- 11 November 2026
- 9 December 2026

CARRIED

5. QUESTIONS UNDER STANDING ORDERS

Nil.

6. URGENT GENERAL BUSINESS UNDER STANDING ORDERS

Nil.

7. NEXT MEETING

The first ordinary meeting of the Rangiora-Ashley Community Board was scheduled for 7pm, Wednesday 12 November 2025 in the Council Chambers at the Rangiora Service Centre.

THERE BEING NO FURTHER BUSINESS, THE MEETING WAS CLOSED AT 11.57am.

CONFIRMED

Liz McClure

_____

Chairperson

12 November 2025

_____

Date

MINUTES FOR THE INAUGURAL MEETING OF THE WOODEND-SEFTON COMMUNITY BOARD HELD AT THE WOODEND COMMUNITY CENTRE, SCHOOL ROAD, WOODEND ON WEDNESDAY 29 OCTOBER 2025 AT 5.00PM.

PRESENT
M Paterson (Chairperson), A Thompson (Deputy Chairperson), B Cairns, J McLachlan, M Potter, S Powell and P Stone.

IN ATTENDANCE
Mayor D Gordon, Deputy Mayor P Redmond and Councillor Bartle.

J Millward (Chief Executive), T Kunkel (Governance Team Leader) and K Rabe (Governance Advisor).

Two members of the public were present.

At the commencement of the meeting, the Chief Executive, J Millward, formally opened the meeting and welcomed the newly elected Board members to the inaugural meeting of the fourth term of the Woodend-Sefton Community Board.

1. APOLOGIES

Nil.

2. CONFLICTS OF INTEREST

There were no conflicts declared.

3. BOARD MEMBERS' DECLARATIONS

The Chief Executive invited elected members to read and sign their declarations as required in terms of Schedule 7 of the Local Government Act, 2002, which was witnessed and signed by the Chief Executive.

Declaration by Community Board members:

I, (name), declare that I will faithfully and impartially, and according to the best of my skill and judgement, execute and perform, in the best interests of the Woodend-Sefton community, the powers, authorities, and duties vested in or imposed upon me as Member of the Woodend-Sefton Community Board by virtue of the Local Government Act 2002, the Local Government Official Information and Meetings Act 1987, or any other Act.

Dated at: Rangiora on 29 October 2025

Signature:

Signed in the presence of:

[J Millward]

The Community Board members who read the oath were Brent Cairns, Joal McLachlan, Mark Paterson, Mathew Potter, Shona Powell, Prudence Stone and Andrew Thompson.

To ensure comprehensive representation and effective information sharing across the entire ward, the Chief Executive extended an invitation to the two remaining Kaiapoi-Woodend Ward Councillors to join the Woodend-Sefton Community Board table. The Councillors would have speaking rights at Board meetings but would not hold voting rights.

4. REPORTS

4.1 **Appointment of Chairperson and Deputy Chairperson** – T Kunkel (Governance Team Leader)

J Millward introduced the report and explained the process for electing the Chairperson and Deputy Chairperson. He then called for nominations for Chairperson.

There were no questions from elected members.

Moved: S Powell Seconded: B Cairns

THAT the Woodend-Sefton Community Board:

(a) **Receives** Report No: 250702119829.

(b) **Resolves** to call for nominations of Chairperson and Deputy Chairperson and uses system (A) for voting in the event of more than one member being nominated.

(c) **Appoints** Board Member M Paterson as Chairperson of the Woodend-Sefton Community Board to take immediate effect from 29 October 2025 until the end of the 2025-2028 triennial term in October 2028.

(d) **Notes** remuneration will be appropriately adjusted for the Chairperson from 30 October 2025.

CARRIED

The Chief Executive vacated the Chair in favour of the elected Chairperson, M Paterson.

M Paterson called for nominations for Deputy Chairperson

Moved: B Cairns Seconded: S Powell

(e) **Appoints** Board Member A Thompson as Deputy Chairperson of the Woodend-Sefton Community Board to take immediate effect from 29 October 2025 until the end of the 2025-2028 triennial term.

CARRIED

4.2 **Local Government Act - First Meeting following the Triennial General Election Requirements** – J Millward (Chief Executive)

T Kunkel noted that report outlined legislation which members need to be aware of. Members have been provided with copies of various legislation that may have the most impact on Community Boards as part of their induction packs.

There were no questions from elected members.

Moved: A Thompson Seconded: P Stone

THAT the Woodend-Sefton Community Board:

(a) **Receives** report No 250805144045.

(b) **Receives** legislative material that has been circulated.

CARRIED

4.3 **Elected Member Code of Conduct and Standing Orders** – T Kunkel (Governance Team Leader)

T Kunkel spoke to the report, noting that under legislation, the Board was required to have a Code of Conduct and Standing Orders in place from its inaugural meeting. The Standing Orders provided guidance for the conduct of Board meetings. The Council's Standing Orders had been adapted to better meet the needs of Community Boards. However, it was noted that the Government, through the Local Government (Systems Improvements) Amendment Bill, was proposing to introduce standardised Codes of Conduct and Standing Orders for all councils. As a result, it was anticipated that the Board's Code of Conduct and Standing Orders would need to be reviewed once further details of the proposed Bill become available in the new year.

There were no questions from elected members.

Moved: J McLachlan Seconded: P Stone

THAT the Woodend-Sefton Community Board:

(a) **Receives** report No. 250805143935.

(b) **Receives** the 2025 Elected Members Code of Conduct document (Trim 230918145779).

(c) **Receives** the 2025 Community Board Standing Orders (Trim 251013193983).

(d) **Notes** that both the Code of Conduct and Standing Orders will be reviewed by the Board at either its March or April 2026 meeting.

CARRIED

4.4 **Woodend-Sefton Community Board's Meeting dates from October 2025 to December 2026** – T Kunkel (Governance Team Leader)

T Kunkel introduced the report and took it as read.

A Thompson requested that staff investigate the possibility of holding the April 2026 meeting at the Waikuku Beach Hall.

Moved: P Stone Seconded: M Paterson

THAT the Woodend-Sefton Community Board:

(a) **Receives** report No. 250702119939.

(b) **Resolves** to hold meetings at the Woodend Community Centre, School Road, Woodend, commencing at 5.30pm, on the following dates:

- 10 November 2025
- 8 December 2025
- 9 February 2026 *(Sefton Hall – provided that the venue was available)*
- 9 March 2026
- 14 April 2026
- 11 May 2026
- 15 June 2026
- 13 July 2026
- 10 August 2026

- 14 September 2026
- 12 October 2026
- 9 November 2026
- 7 December 2026

(c) **Resolves** to hold a meeting at the Sefton Hall, Earlys Road, Upper Sefton Road, Sefton, commencing at 5.30pm, on 9 February 2026, with the alternative backup venue being the Woodend Community Centre.

(d) **Notes** that a booking for the Waikuku Beach Community Hall, Park Terrace, Waikuku Beach was unable to be included as a venue due to the Hall being booked for the times required.

CARRIED

5. QUESTIONS UNDER STANDING ORDERS

Nil.

6. URGENT GENERAL BUSINESS UNDER STANDING ORDERS

Nil.

7. NEXT MEETING

The first ordinary meeting of the Woodend-Sefton Community Board was scheduled for 5:30pm, Monday 10 November 2025 at the Woodend Community Centre.

THERE BEING NO FURTHER BUSINESS, THE MEETING WAS CLOSED AT 5.19PM.

CONFIRMED

Mark Paterson

Chairperson

10 November 2025

Date

MINUTES FOR THE INAUGURAL MEETING OF THE KAIAPOI-TUAHIWI COMMUNITY BOARD HELD IN THE KAIKANUI ROOM, RUATANIWHA KAIAPOI CIVIC CENTRE, 176 WILLIAMS STREET, KAIAPOI, ON THURSDAY, 27 OCTOBER 2022 AT 1.30PM.

PRESENT

J Watson (Chairperson), R Keetley (Deputy Chairperson), T Bartle, A Campbell, H Carroll, P Redmond, S Stewart

IN ATTENDANCE

B Cairns (Kaiapoi-Woodend Ward Councillor), S Powell (Kaiapoi-Woodend Ward Councillor),

J Millward (Chief Executive), C Brown (Manager Community and Recreation), K Rabe (Governance Advisor) and A Connor (Governance Support Officer).

There were no members of the public present.

At the commencement of the meeting, the Chief Executive, J Millward, took the Chair and welcomed the newly elected Board members and the members of the public to the inaugural meeting of the fourth term of the Kaiapoi-Tuahiwi Community Board.

1 APOLOGIES

There were no apologies

2 CONFLICTS OF INTEREST

There were no conflicts of interest

3 BOARD MEMBERS' DECLARATIONS

3.1 Local Government Act 2002 - Schedule 7 – Clause 14: Declaration by Member

The Chief Executive invited elected members to read and sign their declarations as required in terms of Schedule 7 of the Local Government Act, 2002, which was witnessed and signed by the Chief Executive.

Declaration by Community Board members:

I, (name), declare that I will faithfully and impartially, and according to the best of my skill and judgement, execute and perform, in the best interests of the Kaiapoi-Tuahiwi community, the powers, authorities, and duties vested in or imposed upon me as Member of the Kaiapoi-Tuahiwi Community Board by virtue of the Local Government Act 2002, the Local Government Official Information and Meetings Act 1987, or any other Act.

Dated at: Kaiapoi on 30 October 2025

Signature:

Signed in the presence of:

[J Millward]

The Community Board members who read the oath were Tim Bartle, Abbie Campbell, Henrietta Carroll, Russell Keetley, Philip Redmond, Sandra Stewart and Jackie Watson.

To ensure comprehensive representation and effective information sharing across the entire ward, the Chief Executive extended an invitation to the two remaining Kaiapoi-Woodend Ward Councillors, T Bartle and S Powell, to join the Kaiapoi-Tuahiwi Community Board table. The Councillors would have speaking rights at Board meetings but would not hold voting rights.

4 REPORTS

4.1 Appointment of Chairperson and Deputy Chairperson – K Rabe (Governance Advisor)

J Millward introduced the report and explained the process for the Chair and Deputy Chair election process.

The Chief Executive called for nominations for the position of Chairperson.

T Bartle believed that J Watsons and R Keetley should share the role of Chairperson and Deputy Chairperson during the 2025-28 triennial. He highlighted the advantages of allowing an experienced Chair to pass on knowledge and advice to the Deputy Chair which would provide a smooth succession and continuity moving forward especially as J Watson had indicated that she was unlikely to seek re-election during the next election period.

P Redmond endorsed T Bartles view, noting he was participating in a similar arrangement in the role of Deputy Mayor for the Council.

H Carroll appreciated the sentiment behind sharing the role however queried if there was provision within the Act to allow for to happen. J Millward replied that staff had investigated the matter during the previous term when a similar situation had occurred with the Oxford-Ohoka Community Board. It was emphasised that co-chairing was not allowed however the role could be split with distinct time periods set as to when each person was in the Chairperson and Deputy Chairperson role.

Moved: T Bartle Seconded: P Redmond

THAT the Kaiapoi-Tuahiwi Community Board:

(a) **Receives** Report No: 250702119849.

(b) **Resolves** to call for nominations of Chairperson and Deputy Chairperson and uses System (A) for voting in the event of more than one member being nominated.

AND

(c) **Appoints** Board Member J Watson as the first Chairperson of the Kaiapoi-Tuahiwi Community Board for the first half of the 2025-28 triennial term to take immediate effect from 30 October 2025 until 30 April 2027.

(d) **Notes** that the remuneration of the Chairperson will be appropriately adjusted as from 31 October 2025.

CARRIED

The Chief Executive then vacated the Chair in favour of the elected Chairperson, J Watson.

When considering the appointment of Deputy Chairperson, S Stewart suggested that she would like to see a further learning experience be offered and moved that once R Keetley became Chair that H Carroll become the Deputy Chair rather that it going to J Watson, as previously initiated. This could stand the Board in good stead in the future.

Moved: S Stewart Seconded: A Campbell

(e) **Appoints** Board Member R Keetley as Deputy Chairperson of the Kaiapoi-Tuahiwi Community Board for the first half of the 2025-28 triennial term to take immediate effect from 30 October 2025 until 30 April 2027.

(f) **Appoints** Board Member H Carroll as Deputy Chairperson of the Kaiapoi-Tuahiwi Community Board for the second half of the 2025-28 triennial term to take immediate effect from 1 May 2027 until the end of the 2025-2028 triennial term in October 2028.

CARRIED

P Redmond abstained

S Stewart felt calling on experience and expertise already present and upskilling newer members was vital.

4.2 Local Government Act – First Meeting Following the Triennial General Election Requirements – J Millward (Acting Chief Executive)

K Rabe took the report as read.

Moved: J Watson Seconded: T Bartle

THAT the Kaiapoi-Tuahiwi Community Board:

(a) **Receives** report No 250805144001.

(b) **Receives** legislative material that has been circulated.

CARRIED

4.3 Elected Member Code of Conduct and Standing Orders – S Nichols (Governance Manager)

K Rabe stated legislative change were expected in early 2026 which would influence the standing orders at which time the Board would undertake a review.

Moved: P Redmond Seconded: R Keetley

THAT the Kaiapoi-Tuahiwi Community Board:

(a) **Receives** report No 250805143924.

(b) **Receives** the 2025 Elected Members Code of Conduct (Trim 230918145779).

(c) **Adopts** the 2025 Orders Standing Orders for Community Boards (Trim 251013193983), effective from 30 October 2025.

CARRIED

P Redmond acknowledged the importance of these operating documents for the Board.

4.4 Meeting and Workshop Dates for 2025/2026 – T Kunkel (Governance Team Leader)

K Rabe took the report as read.

Moved: S Stewart Seconded: J Watson

THAT the Kaiapoi-Tuahiwi Community Board:

(a) **Receives** report No. 250703120657.

(b) **Resolves** to hold Board meetings at the Ruataniwha Kaiapoi Civic Centre, Williams Street, Kaiapoi, commencing at 5pm, on the following dates:

- 17 November 2025
- 8 December 2025
- 16 February 2026
- 16 March 2026
- 20 April 2026
- 18 May 2026
- 15 June 2026
- 20 July 2026
- 17 August 2026
- 21 September 2026
- 19 October 2026
- 16 November 2026
- 14 December 2026

CARRIED

5 QUESTIONS UNDER STANDING ORDERS

Nil

6 URGENT GENERAL BUSINESS UNDER STANDING ORDERS

Nil.

4.1 NEXT MEETING

The first ordinary meeting of the Kaiapoi-Tuahiwi Community Board is scheduled for 5pm, Monday 17 November at the Ruataniwha Kaiapoi Civic Centre.

THERE BEING NO FURTHER BUSINESS, THE MEETING WAS CLOSED AT 9.36pm.

CONFIRMED

_____
Chairperson

17 November 2025

_____
Date