

ASHBURTON WATER MANAGEMENT ZONE COMMITTEE AGENDA

A **Meeting** of the Ashburton Water Management Zone Committee will be held as follows:

DATE: Tuesday 26 May 2020

TIME: 1:15 pm

VENUE: Via Zoom

MEETING CALLED BY: H Riach, Chief Executive, Ashburton District Council
B Bayfield, Chief Executive, Environment Canterbury

ATTENDEES: Mr Chris Allen
Mrs Angela Cushnie
Ms Genevieve de Spa
Mr Cargill Henderson
Mr Bill Thomas
Mr John Waugh
Mr Arapata Reuben (Te Ngai Tuahuriri Runanga)
Mr Karl Russell (Te Runanga o Arowhenua)
Mr Les Wanhalla (Te Taumutu Runanga)
Mr Brad Waldon-Gibbons (Tangata Whenua Facilitator)
Councillor Stuart Wilson (Ashburton District Council)
Councillor Ian Mackenzie (Environment Canterbury)
Mayor Neil Brown (Ashburton District Council)

Zone Facilitator

Dave Moore

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Environment Canterbury

Committee Advisor

Carol McAtamney

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Ashburton District Council

Tangata Whenua Facilitator

Brad Waldon-Gibbons

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Environment Canterbury



4 Register of Interests

Representative's Name and Interest	
Chris Allen	Farm owner of sheep, beef, lambs, crop Water resource consents to take water from tributary of Ashburton River and shallow wells National board member Federated Farmers of New Zealand with responsibility for RMA, water and biodiversity Member of Ashburton River Liaison Group
Neil Brown	Mayor Acton Irrigation Limited - Director Irrigo Centre Limited - Director Acton Farmers Irrigation Co-operative Limited - Director Browns Farm Limited – Director and Shareholder
Angela Cushnie	Owner of Country Copy, a communication and promotion business based in Mid Canterbury Operates a very small lifestyle block in Eiffelton On the Communication Committee for Advance Ashburton Community Foundation Co-author of 'Water, Farming and Families' Freelance writer for Latitude Magazine Kanuka Mid Canterbury Regeneration Trust - Trustee Rakaia Environmental Enhancement Trust (Deputy Representative) NZ Landcare Trust 'Managing Westlands as Farm Assets's project' – Farmer Engagement Hinds Reserve Board Committee member
Genevieve de Spa	Owner of Kakariki Camps focusing on 'Head, Hands, Heart' approach to biodiversity education Employee and member of Stavely Campsite Committee Recipient of Immediate Steps Funding Member Mt Somers Walkway Society and Ashburton District Biodiversity Action Group (ADBAG) Active member and organiser of 'Extinction Rebellion'
Cargill Henderson	Environmental Manager – ANZCO Foods Ltd
Ian MacKenzie	Environment Canterbury Councillor
Karl Russell	Arowhenua Marae Trustee
Arapata Reuben	Trustee – Tuahiwi Marae Trustee – Tuhono Trust Trustee – Mana Waitaha Charitable Trust Member - National Kiwi Recovery Group Rūnanga Rep and Chair – Christchurch – West Melton Water Zone Committee
Bill Thomas	Farm owner of Longbeach Estate Ltd (sheep, beef, lambs, arable, dairy) Member of Eiffelton Irrigation Scheme Hekeao/Hinds Water Enhancement Trust - Trustee
Les Wanhalla	Returning good health and mauri O Te Waihora/Lake Ellesmere Kaitiakitanga, Whakapapa Rugby league, life member, honorary south Kiwi
Stuart Wilson	Ashburton District Councillor and Chair of Service Delivery Committee A son who is a Director of Mayfield Hinds Irrigation Co and Chair of RDR
John Waugh	Member of the Ashburton Branch of the Royal Forest and Bird Protection Society Member of Hydrological Society Rakaia Environmental Enhancement Trust (Representative)

5 Confirmation of Minutes

Unconfirmed Minutes

Minutes of a meeting of the **Ashburton Water Management Zone Committee** held on Tuesday 25 February 2020, commencing at 1:00 pm in the Mayor's Reception, Council Office, 5 Baring Square West, Ashburton.

Present

Councillor Ian MacKenzie, Bill Thomas (Chair), Chris Allen, Angela Cushnie, Genevieve de Spa, Les Wanhalla and John Waugh.

In attendance

Environment Canterbury: Dave Moore (Facilitator), Ashburton District Council: Carol McAtamney (minutes)

7 members of the public attended the meeting.

1 Welcome

Brad Waldon-Gibbons opened the meeting with a Karakia.

2 Apologies

That apologies for absence be received on behalf of Mayor Neil Brown, Councillor Stuart Wilson, Cargill Henderson, Araparta Reuben and Karl Russell.

Thomas/Wilson

Carried

3 Extraordinary Business

None.

4 Register of Interests

Angela Cushnie – add Hinds Reserve Board Committee member

5 Confirmation of Minutes

That the minutes of the Ashburton Water Management Zone Committee meeting held on 26 November 2019, be taken as read and confirmed.

Allen/Wanhalla

Carried

6.1 Matters Arising

- Nil.

6 Correspondence

Outward/Inward:

Nil.

7 Public Contributions

None.

8 Election of Chair, Deputy Chair and Regional Committee Representative for 2020

Facilitator Dave Moore took the chair for the elections process.

Nominations for the Chair of the Ashburton Zone Committee

That Bill Thomas be nominated as Chair of the Ashburton Zone Committee for the term of one year.

de Spa/Allen

Confirmed

Nominations for the Deputy Chair of the Ashburton Zone Committee

That Chris Allen be nominated as Deputy Chair of the Ashburton Zone Committee for the term of one year.

Cushnie/McKenzie

Confirmed

Nominations for the Regional Committee Representative

Due to the number of apologies for this meeting it was agreed to defer the election of the Regional Committee Representative until the March meeting.

9 Facilitators Update

Dave Moore verbally worked through his report.

Refresh Process

The refresh process had been put on hold until the Local Body Elections had been held. Ecan have advised that the proposed timeline is to advertise for candidates in September, with the selections process being undertaken in November.

Zone Committee members felt that they would like to see this process undertaken sooner. Contact to be made with Ecan to see if the process can be undertaken sooner.

Annual Report

The Chairman is to present the annual report to the Environment Canterbury Board and the Ashburton District Council at their May meetings.

10 Cracroft Stock Water Intake – Flood Damage and Implications

Andy Guthrie – ADC Assets Manager provided a verbal update. (1.25pm)

The Cracroft stockwater is Council's only direct access to water from the Rangitata River. As a consequence of the December floods, the existing Cracroft intake sustained significant damage which interrupted normal supply and left the site susceptible to further damage. Reinstatement work undertaken in January has also been impacted by subsequent high flows in the river.

Approval is being sought by Ashburton District Council to formally decommission the Cracroft Stockwater intake.

A consent was approved for RDRML to take additional water through their intake in order to be supplied to ADC through MHV Limited.

11 Immediate Steps Funding Application for Harris Reserve

Donna Lill 1.45pm

An update on a previously funded projects was provided:

- Carex – Harris C Drain – funded three projects contributing \$23,000 in 2014, planted more than 4,000 plants which increased cover, shade and native vegetation. The drains previously needed cleaned once or twice a year after this project these drains no longer need cleaning.
- Okawa Wetland (Upper Hinds – Stage 1) – two projects totalling \$23,000 were funded in 2014 and 2015. More than 20,000 plants have been planted.

Harris Reserve Application

Declarations of Interest:

- John Waugh declared he was a member of Forest and Bird, but was not a member of the Ashburton Community Conservation Trust
- Genevieve de Spa questioned whether she had a conflict of interest due to the fact that she receives funding from Immediate Steps programme for weeding. It was deemed she did not have a conflict in this instance.

Resolved:

That the Zone Committee supports the funding request for the Harris Reserve and allocates funding totally \$20,000 from the Immediate Steps Fund (\$4k per year over next 5 years)

De Spa/Waugh

Confirmed

Les Wanhalla abstained from voting

12 Nitrate Trends and Patterns

Helen Rutter – Aqualinc Reseach Ltd (presented research that she and her daughter Katherine Rutter – Rangi Ruru Girls’ School had undertaken, 2:25pm)

13 Ashburton – Work Programme Progress Update for Quarter 2 (Oct/Dec) FY 2019/20 – Janine Holland

14 Other Business

Next meeting

The next meeting of the Ashburton Water Zone Committee will be held in the Ashburton District Council Chamber at 1:00pm on Tuesday 24 March 2020.

The meeting closed at 3.36pm with a Karakia by Brad Waldon-Gibbons.

Dated this 26th day of May 2020 _____ (Chair)

Ashburton Zone Committee Report

Date 26 May 2020
Report to Ashburton Water Zone Committee
From Dave Moore – Zone Facilitator
Subject Election of Regional Committee Representative for 2020

8 Election of Regional Committee Representative for 2020

Purpose

Election of:

- Regional Committee Representative

Background

Chair

The Zone Committee appoints a representative to the Regional Water Management Committee. This appointee may be the Chair of the Zone Committee or another member appointed by the Committee from its membership.

The Zon representative on the Regional Committee will

- Speak on behalf of the Committee and act as an advocate for it at Regional Committee meetings.
- Keep the Zone Committee well informed on the activities and deliberations of the Regional Committee.

Recommendation

The Ashburton Zone Committee elect a Regional Committee representative for 2020.

Ashburton Zone Committee Report

Date 26 May 2020
Report to Ashburton Water Zone Committee
From Dave Moore – Zone Facilitator
Subject Immediate Steps Projects

9 Immediate Steps Projects

Purpose

Formal approval of Immediate Steps projects discussed and agreed at the 5 May 20202 Zone Committee Workshop:

1. Alford Forest River Terrace Sycamore Control - \$16,000
2. Oakdale Stream Harris Planting - \$11,480

Recommendation

That the Zone Committee approves these projects.

Ashburton Zone Committee Report

Date 26 May 2020
Report to Ashburton Water Zone Committee
From Adrian Meredith and Lachie Ashton
Subject Carters Creek Water Quality and Stream Walk Report

11 Carters Creek Water Quality and Stream Walk Report

Carters Creek has been identified as a potential candidate for community input towards stream rehabilitation. Water quality monitoring was carried out at 5 sites from August 2018-January 2019 (Figure 1). A stream walk was carried out on the 30th January 2020 from Lake Hood to the Tinwald Township Eastern Boundary.

This report summarises the current water quality data and stream walk observations. An action plan has been formed from identifying critical sources within the catchment.



Figure 1: Lower Carters Creek catchment and water quality monitoring sites

The majority of water quality samples were taken during baseflow. The November monitoring occasion was carried out following heavy rainfall. Approximately 75mm was recorded for a nearby rainfall gauge in Hinds over the preceding 3-4 days.

Water quality results indicate DRP, NH4-N, turbidity and *E.coli* concentrations are greatest overall for the two lower sites at Grove Farm and Boundary Roads. This area is mostly farmland as you move downstream from the town with a few smaller lifestyle block holdings. Faecal source tracking taken at Grove Farm Road indicated faecal contamination was most likely sourced from sheep, cows and birds.

At Boundary Rd, human faecal sources were detected on two of 3 sampling occasions, in addition to livestock and avian sources. Elevated *E.coli*, DRP, NH4-N and Turbidity results were observed at Boundary Road under baseflow conditions. No significant rainfall in the weeks prior meant it is unlikely these were related to run-off, rather indicating a high strength source such as septic tanks or municipal sewage.

Site	Date Sampled	E. coli MPN /100mL	General GenBac /100 ml	Human BacH /100 ml	Human BiADO /100 ml	Ruminant BacR /100 ml	Proportion Ruminant	Ruminant Sheep /100 ml	Ruminant Cow / 100 ml	Avian GFD /100 ml	Conclusion
at Grove Farm Rd	3/05/2018	1,400	250,000	300	<43	3,700	10-50%	130	35	300	Ruminant (10–50%) + avian. Also possible human Ruminant source = sheep & cow
at Grove Farm Rd	21/06/2019	910	1,500,000	340	<21	1,000	1% or less	<21	<2	1,300	faecal source - low level ruminant (< 1%) + avian
at Grove Farm Rd	9/08/2019	380	130,000	<17	<21	6,700	10-50%	<21	27	340	faecal source - ruminant (10-50%) + avian. Ruminant source = cow
At Boundary Rd	3/05/2018	2,000	3,700,000	400	<43	410,000	50-100%	77	2,400	500	Ruminant (50–100%) + avian. Also possible human + dog Ruminant source = sheep & cow
At Boundary Rd	21/06/2019	1,600	1,500,000	2,100	530	490	1% or less	<21	<2	1,200	faecal source - human + low level ruminant (< 1%) + avian
At Boundary Rd	9/08/2019	720	390,000	1,300	430	4,900	1-10%	<21	26	250	faecal source - human + ruminant (1-10%) + avian. Ruminant source = cow

Table 1: Faecal Source Tracking analysis for Carters Creek (taken from ESR client report)

So far, we haven't been able to pin-point the source and nothing has been ruled out as a potential source including farm septic tanks, the wastewater pipeline and the wastewater treatment ponds. Environment Canterbury Resource Management Officers are working with Ashburton District Council to identify potential sources of contamination. Evidence of direct stock access was observed at various properties along Carters Creek, especially around the Boundary Rd and Grove Farm Rd monitoring sites.

A combination of water quality monitoring and stream walk observations indicate water quality issues include sedimentation, low aquatic habitat diversity and evidence of faecal contamination sources. Carters Creek appears to be impacted by varying degrees of sedimentation. Sedimentation is an area for concern in streams due to how it smothers the stream bed habitat. Some invertebrate species live in the gaps between stones. Sediment fills these gaps and reduces the available habitat. Invertebrates are an important food source in streams for fish.

Areas of direct stock access were observed, along with bank erosion and pugging from cattle. These are all likely to contribute as sources of sediment and faecal contamination. A pond in the lower reach of Carters Creek provided a function of a sediment trap that was installed to reduce sediment to Lake Hood. Lakes are particularly vulnerable to water quality impacts from sediment loading. The sediment settles out in lakes and can act as a reservoir for nutrients such as phosphorus and ammonia. Nutrients can be released from the sediment to the overlying water under certain pH levels and anoxia at the sediment-water interface. This can cause internal cycling of nutrients in lakes and support algal blooms.

Riparian vegetation was predominately limited to exotic species, and in some cases pest plant species e.g. gorse and blackberry. Riparian vegetation has several benefits for water quality and aquatic ecology. Filtration by riparian plants of overland and sub surface flow can be effective at reducing phosphorus, ammoniacal-nitrogen, faecal bacteria and sediment sources.

Lots of ungrazed exotic grasses were observed along reaches of the stream which are likely to filter out overland flow contaminants but lack native biodiversity and potentially pose a fire risk. Where stock had access to the stream, or fencing was right up to the stream, there was no riparian buffer to provide filtration of water quality contaminants.

Taller riparian vegetation on the northern side of a stream is an effective mechanism for providing shade. Shade is beneficial to streams to reduce the warming of the stream water and restrict aquatic plants/macrophytes from prolifically growing. Where shade was observed for Carters Creek, the stream generally had low aquatic plant growth in comparison to reaches of the stream without shading. Aquatic plants are beneficial in low quantities in streams to provide habitat and cover for fish. In large quantities, aquatic plants choke streams by smothering the available habitat for invertebrates and fish, trap sediment and have extreme oxygen fluctuations.

When the plants respire at night, dissolved oxygen levels can reduce to concentrations that may not support aquatic species and displace them from these reaches. Additionally, aquatic plant proliferations choking the stream can become a flood risk by restricting the path of flow within the stream channel. Currently Carters Creek is cleared of aquatic plants by Environment Canterbury due to the flood risk it poses.

Carters Creek and it's tributary Kebbies Creek have undergone various degrees of modification and resemble a modified watercourse in most places. They do not necessarily follow the original watercourses. The creek suffers from steep banks that are continually eroding into the waterway, and would benefit from rebattering in high erosion risk areas. Bank erosion is especially evident in areas where there is little vegetation to hold the banks and/or stock have been allowed access. There are now long straight stretches with a fairly linear flow that lack the run, pool, riffle characteristics of natural waterways. This has the potential to reduce the health of the ecosystem in the creek through the loss of habitat diversity. The creek does have a gravel/stony base but is often covered by silt.

The creeks are spring fed but also receive stormwater overflows from Tinwald and drains from lifestyle properties and farmland on the topside of Tinwald. A swale just below Melcombe Street in Tinwald, maintained by ECan, often runs and collects runoff from the Laghmor end of town. This swale can have quite a big catchment during the wetter parts of the year. It also collects a lot of rubbish and this is regularly picked up by the River Engineering Field Services Team. A grill to catch rubbish at the highway is also maintained by Field Services and this has helped prevent rubbish getting into the rest of the creek.

A lack of undercut banks, overhanging riparian vegetation or substrate variability (e.g. a mix of cobbles, rocks, boulders) meant there was little habitat diversity and refuge for aquatic species. Bullies, a trout and an eel were observed which give a positive indication that there are some fish species present in the stream, despite a perched culvert at the Lake Hood inlet. It is likely the perched culvert has benefits for the stream to avoid exotic fish species migrating up Carter Creek from Lake Hood. This provides an opportunity for non-migratory fish to exist in Carter Creek without predation from migratory species should salmonid species cease to exist in the future.

The next stage of stream walk observations will be to inspect the creek through Tinwald and the lifestyle properties and farmland above Tinwald. Water sampling has already shown elevated ammonia, phosphorus and faecal bacteria above Tinwald. This indicates a potentially concentrated source such as effluent from leaking septic tanks or stock effluent systems. The water can also be turbid indicating a sediment or organic matter source associated with the nutrients and faecal bacteria. Testing in the town itself between Melcombe Street and Grove Street does not indicate a consistent source of high strength effluent as ammonia and DRP are pretty low. There are however still incidences of high bacteria concentrations which are yet to be explained.

The following actions have been proposed:

1. All landowners with livestock access to the creek have been asked to rectify the problem with an emphasis on permanent fencing to ensure no stock have access to Carters Creek.
2. Environment Canterbury to work with landowners and the community to improve the creek, battering back the banks where necessary to a slope of 3:1, fencing off the creek margins as required, control weeds and establish and maintain new plantings that will stabilize the banks, filter runoff and provide shade and shelter.
3. Environment Canterbury to continue working with the Ashburton District Council to address concerns around the possibility of infrastructure leaking and contaminating Carters Creek or groundwater.
4. Continue to work with council and landowners to inspect the properties bordering the creek in Tinwald and check for potential contamination from any sources in the town that can get into the creek through stormwater/sewage drains, septic tanks, roadside gutters and natural runoff points.
5. Inspect the lifestyle and farm properties above Tinwald that are in the catchment to see that they are complying and to find sources of contamination that are showing up in water tests.
6. Work with community groups and leaders interested in improving Carters Creek through community projects.
7. Work with ECan scientists and biodiversity staff, Rūnanga, Forest and Bird, Fish and Game and the community as to what sort of biodiversity is desirable along Carters Creek.
8. Continue with water sampling as required.
9. Seek funding to be able to carry out work on Carters Creek and to fund community engagement.

Order of Business

Ashburton Zone Committee Meeting

Tuesday 26 May 2020

Timetable	
Time	Item
1:15 pm	Meeting Commences

1	Welcome, Karakia	
2	Apologies	
3	Extraordinary Business	
4	Register of Interests.....	1
5	Confirmation of Minutes Unconfirmed Minutes	2
6	Correspondence	4
6.1	Outward	4
	-Nil	4
6.2	Inward	4
	-Nil	4
7	Public Contribution	4
8	Election of Regional Committee Representative for 2020.....	5
9	Immediate Steps Projects	6
10	Ashburton Consent Reviews – Andrew Parris and Bianca Sullivan verbal report	6
11	Carters Creek Water Quality and Stream Walk Report	7
12	Other Business.....	10