

# From Information to Insights Giving Communities & Rivers a Voice



## KIRSTY BRENNAN



Water Clarity Current Programmes View Data Submit Data Join Our Supporters

### STREAMED

Community-sourced NZ Freshwater Data

Streamed is an online water clarity monitoring tool to store and display data collected by members of the community. Developed by EOS Ecology, Streamed provides communities with a greater awareness and evidence-based understanding of their local freshwater environments. Our vision is to:

- enhance how communities access and understand water clarity data
- increase participation in community monitoring programmes and
- empower communities to effect change in their catchment.

There is increasing public concern in New Zealand about the poor water quality of our streams and rivers. Sediment suspended in the water is a contributor to poor water quality, affecting the health and recreational values of our waterways. It reduces water clarity and smothers streambeds, negatively impacting aquatic life, and transporting pollutants.

Water clarity is a good indicator of stream health and community-based water clarity monitoring programmes can play a key part in helping us manage our land and water. Water clarity measurements are simple to collect, and suitable for community and schools to undertake.

[Learn more about water clarity](#)

Number of records Water clarity categories Water clarity average

Over time Compare sites

Selection 1: Cashmere Stream Catchment Clarity Selection 2: Cashmere Stream Catchment Clarity

Selection 1: Water clarity records  
Average water clarity **88cm**  
Dominant LAND USE at site: Rural (ag/hort)  
Dominant TOPOGRAPHY at site: Plains

Selection 2: Water clarity records  
Average water clarity **40cm**  
Dominant LAND USE at site: Rural (ag/hort)  
Dominant TOPOGRAPHY at site: Mixed

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# STREAMED

Community-sourced NZ Freshwater Data  
OUR RIVERS • WE MONITOR • WE CARE

**Community members measure water clarity with a clarity tube then enter their results at [www.streamed.nz](http://www.streamed.nz) – an online tool that stores, interprets and graphically displays their data.**

01 Water clarity is a good indicator of stream health – provide community groups with the skills to collect their own accurate water clarity data

02 Provide community groups an effective, technologically advanced online space to store & display real-time water clarity data

03 Allows groups to make data public = greater awareness of local waterway issues, gain new members & continued participation

04 Allow community groups of all ages around NZ to connect online about water clarity issues & improvements

05 Give community groups the ability to share their water clarity data with others

06 Provide automatic alerts to regional authorities so they can react when readings reach specific trigger levels

07 Provide regional authorities with regular, accurate water clarity data to help with strategic planning & management

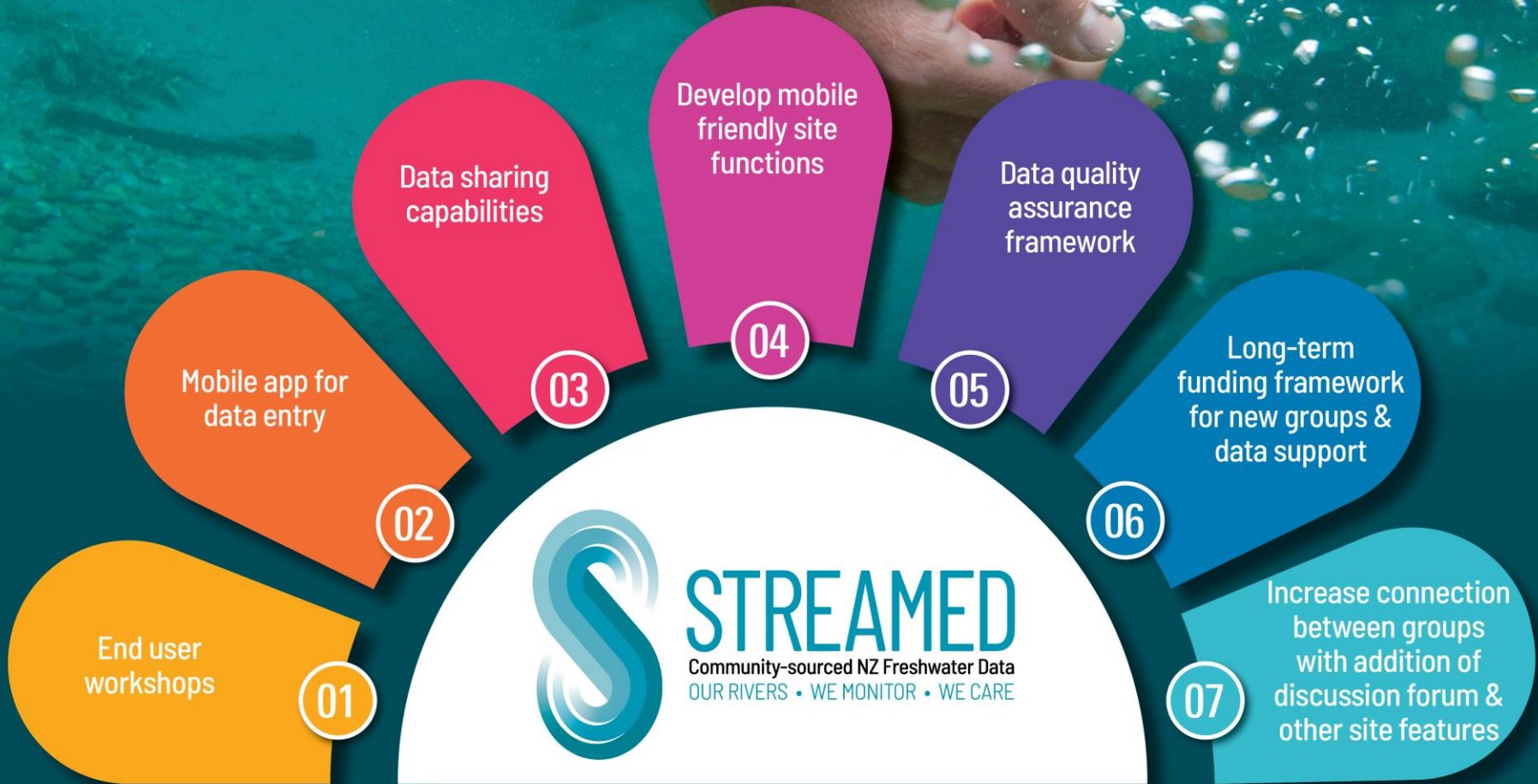
08 Provide NZ waterways with a digital, evidence-based voice to help with the implementation of effective actions for water clarity issues



# STREAMED

Community-sourced NZ Freshwater Data  
OUR RIVERS • WE MONITOR • WE CARE

## THE VISION



# FUTURE WORK



# Thanks!

Any questions contact:

[kirsty@eosecology.co.nz](mailto:kirsty@eosecology.co.nz) / [www.eosecology.co.nz](http://www.eosecology.co.nz)





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There is increasing public concern in New Zealand about the poor water quality of our streams and rivers. Sediment suspended in the water is a key contributor to poor water quality, affecting the health and recreational values of our waterways. It reduces water clarity and smothers stream beds, negatively impacting aquatic life, and transporting pollutants.

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[Learn more about water clarity](#)



Water clarity is being measured by community and school groups across New Zealand. Those groups that are part of the Streamed community have their monitoring data accessible for everyone to view and download from this website. Find out more about these groups and their water clarity monitoring programmes below.

### Streamed Monitoring Site Locations

Legend

**Water Clarity Monitoring Sites**

- Nature Agents
- Cashmere Stream Care Group
- Cashmere High School

Find address or place

(1 of 2)

Site Name:	Pawsons Stream at cow sheds (Site: 1)
Project Affiliation:	Nature Agents
Project Name:	Nature Agents - Canterbury Water Clarity
Site Owner:	Duvauchelle School
Waterway Name (size):	Pawsons Stream (Medium)
Dominant	

[Zoom to](#)



## Submit Data

Once your community-based water clarity monitoring programme has joined Streamed, been approved and added to our database, you can start submitting your data here – just fill in the form below.

**Site name\***

Select the name of the site

**Date collected\***

Select the date the water clarity readings were taken

**Time collected\***

Select the start time the water clarity readings were taken

**Observer name\***

Write your first and last names, capitalising the first letter of your first and last names



Water clarity data entered by the Cashmere Stream Care Group is summarised below. The Cashmere Stream Catchment Clarity monitoring programme aims to find the key sources of sediment causing poor water clarity within the catchment and to determine if water clarity is improving or degrading over time.

There are a number of dashboards that group the data into clarity categories. This allows you to view how water clarity changes between sites, over time and due to different land-based effects.

Information about the data and how it's displayed can be found in the text box on the left side of the browser; this can be hidden or expanded using the arrow on the vertical divider. To view the different data click the navigation tabs below.

If you use this data you agree to the **Disclaimer** on our [Terms of Use](#) page, plus you will acknowledge the source (i.e., Streamed, www.streamed.nz, date accessed) and the group/s who collected the data.

[Interactive site map](#)

[Land-based effects](#)

[Over time](#)

[Compare sites](#)

[Site 54](#)

### Latest Water Clarity Readings for Cashmere Stream Catchment Clarity Sites

**About**

This interactive map shows the LOCATION and LATEST WATER CLARITY READING for sites within this monitoring programme. The coloured markers on the map show the location of the monitoring sites, while the colour of each marker indicates the water clarity category reading from the last monitoring. See the legend to find out what the category colours mean.

**How to use the map:**

In the top left corner are three icons:

- Left icon (currently open) provides information about the map and how to use it.
- Middle icon is the legend where you can view what data is displayed on the map.

**Map Data:**

Property	Value
Land Use:	Rural (ag/hort)
Dominant Topography:	Mixed
Date of Latest Reading:	3 Mar 2021
Latest Water Clarity Reading:	63.50 cm
Latest Water Clarity Category:	Poor

Sourced from the LINZ Data Service and licensed for re-use under the Creative Common...



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Interactive site map Land-based effects Over time Compare sites Site 54

Guide Readings Categories Waterway type Categories per site

### How to use the dashboards

- To see the AVERAGE WATER CLARITY READINGS dashboard click the 'Readings' navigation tab above.
- To see the WATER CLARITY RESULTS PER CATEGORY dashboard click the 'Categories' navigation tab above.
- To see the WATER CLARITY RESULTS BY WATERWAY TYPE dashboard click the 'Waterway type' navigation tab above.
- To see the WATER CLARITY RESULTS PER CATEGORY PER SITE dashboard click the 'Categories per site' navigation tab above.

### Average water clarity readings dashboard:

This dashboard shows how the average water clarity readings across all sites for this monitoring programme vary in relation to:

- dominant land use
- dominant topography
- waterway size.

The higher the water clarity reading the better the water clarity, therefore the less

### Quick guide to LAND-BASED EFFECTS dashboards

Left scrolling panel on all dashboards has explanations of graphs, colours & data being visualised



Bar graph coloured category trigger lines indicate where a new category STARTS



Hover over pie graph segments & a pop-up window with more details will appear (this works on all pie graphs on all dashboards)



Click on any bar on any graph on this dashboard & the map will change to show that site location

Show apps

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Interactive site map

**Land-based effects**

Over time

Compare sites

Site 54

Guide

**Readings**

Categories

Waterway type

Categories per site

### Average water clarity readings

This dashboard shows how the average water clarity readings across all sites for this monitoring programme vary in relation to dominant land use, dominant topography and waterway size.

Water clarity readings are grouped into the following water clarity categories:

- >99cm = **Extremely good**
- 70-99cm = **Very good**
- 55-69cm = **Poor**
- 35-54cm = **Very poor**
- <35cm = **Extremely poor**

### Water clarity impacts

The movement of sediment from land to waterways is influenced by the type of land use and topography (how steep or flat it is) of a catchment. Once sediment has reached the waterway, the size of a waterway may also impact the clarity of the water. Read below for an explanation of how these factors can impact water clarity, and explore the data represented

### Water clarity records

 **5284**  
Average water clarity

 **46cm**  
(out of 100cm)

**SMALL** size waterway

### Average water clarity

 **36cm**  
(out of 100cm)

**MEDIUM** size waterway

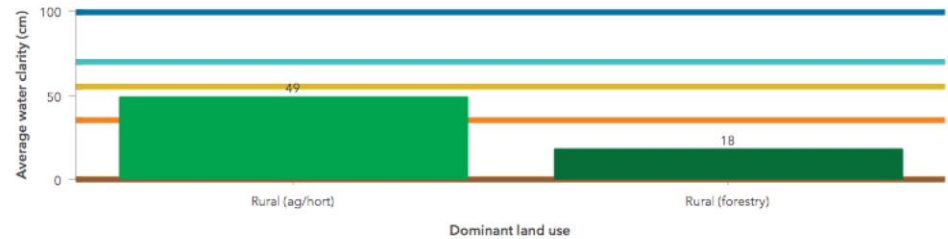
### Average water clarity

 **48cm**  
(out of 100cm)

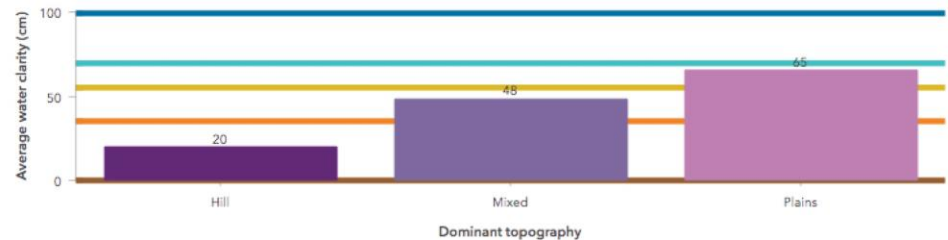
**LARGE** size waterway

No large size waterways

### Dominant Land Use



### Dominant Topography



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Interactive site map Land-based effects **Over time** Compare sites Site 54

Guide **Daily** Monthly and yearly

### Daily water clarity readings

This interactive dashboard shows how water clarity varies at each site within this monitoring programme over time.

Water clarity readings are grouped into the following water clarity categories:

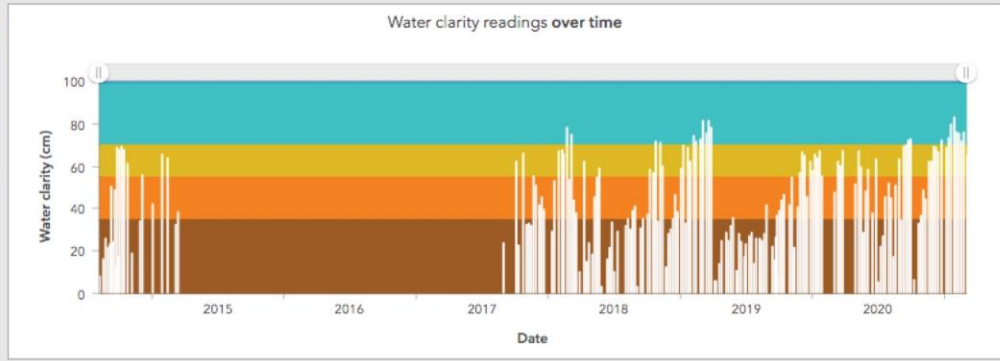
- >99cm = Extremely good
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### Why monitor water clarity over time?

Water clarity readings change often and respond quickly to environmental factors such as rainfall. By collecting time-based data we can look at long-term water clarity trends to observe any seasonal patterns, or if clarity is getting better/worse over time.



Project Affiliation:	Cashmere Stream Care Group
Project Name:	Cashmere Stream Catchment Clarity
Site Owner:	Cashmere Stream Care Group
Site Name:	Cashmere Stream - Upstream Cashmere Valley Drain (Site: 64)



Average water clarity <b>45cm</b> <small>(out of 100cm)</small>	Water clarity records <b>181</b>	Latest water clarity <b>3 March 2021</b> <b>65cm</b>	Water clarity category results 
Worst water clarity <b>3cm</b> <small>(out of 100cm)</small>	Best water clarity <b>83cm</b> <small>(out of 100cm)</small>	Cashmere Stream - Upstream Cashmere Valley Drain (64) <small>(out of 100cm)</small>	

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Interactive site map Land-based effects Over time **Compare sites** Site 54

Guide **Compare** Readings per site

### Comparison of data from two sites

The interactive dashboard allows you to compare water clarity data from two different sites within this monitoring programme.

Water clarity readings are grouped into the following water clarity categories:  
**>99cm = Extremely good**  
**70-99cm = Very good**  
**55-69cm = Poor**  
**35-54cm = Very poor**  
**<35cm = Extremely poor**

### Why compare monitoring site data?

By comparing sites you can see how different sites may affect results for this programme, and identify where potential issues in water clarity arise from. A good comparison is to compare an upstream site with a downstream site. This will show you how water clarity changes as you move down the catchment.

You can also explore water clarity at sites

Selection 1: Cashmere Stream - Upstream Sutherlands... Selection 2: Cashmere Stream - Downstream Cashmer...

Selection 1:		Selection 2:	
<b>Water clarity category results</b> 	<b>Water clarity records</b> 57 Average water clarity <b>88cm</b> <small>(out of 100cm)</small>	<b>Water clarity category results</b> 	<b>Water clarity records</b> 226 Average water clarity <b>40cm</b> <small>(out of 100cm)</small>
<b>Dominant LAND USE at site:</b> Cashmere Stream - Upstream Sutherlands Road <b>Rural (ag/hort)</b>	<b>Dominant TOPOGRAPHY at site:</b> Cashmere Stream - Upstream Sutherlands Road <b>Plains</b>	<b>Dominant LAND USE at site:</b> Cashmere Stream - Downstream Cashmere Valley Drain <b>Rural (ag/hort)</b>	<b>Dominant TOPOGRAPHY at site:</b> Cashmere Stream - Downstream Cashmere Valley Drain <b>Mixed</b>