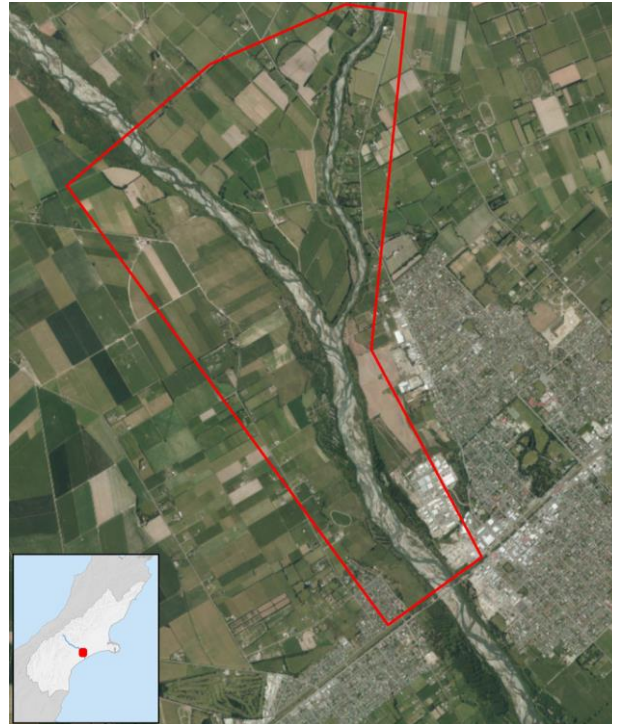




Introduction and Scope

- Four braided river reaches - “test cases”
- Provide information on values to inform ECan policy development
- National and international value of braided rivers
- Multi-discipline assessments:
 - Landscape values
 - Natural character
 - Aquatic and terrestrial ecological values
 - Recreational values

Study Reach Extent



Landscape & Natural Character

Landscape Values Methodology

- **Landscape** - *Cumulative expression of natural and cultural features, patterns and processes including community values.*
- High-level desktop assessment, to provide an understanding of the landscape values of the study reach context.

Biophysical	Geology, ecology, hydrology etc
Sensory	Perceptual dimension including appreciation through our senses and aesthetic qualities such as legibility, coherence etc
Associative	Cultural meanings, history, identity and belonging.

Natural Character Methodology

Natural Character- *the extent to which natural elements, patterns and processes occur.*

Degree of natural character- is highest where modification is least.

- Multi-discipline input, ecology, water sciences and landscape
- Desktop research and field work
- Identify extent of braidplain- historic maps, aerial photography, flood extents and fieldwork
- Assessed nine attributes of braided river
- Level of natural character rated on a 5 point scale

Very High	High	Moderate	Low	Very Low
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Findings



Willow planting for flood protection, on the braidplain.

* None of these sites present on this map

Findings

NATURAL CHARACTER		
COMPONENT	ATTRIBUTE	NATURAL CHARACTER RATING
Braidplain	Braidplain Morphology	Moderate / Low
	Active Channel	Moderate / High
	Man-made Structures	High
	Flow Regime	Low
	Water Quality	Moderate
	Vegetation / Terrestrial Ecology	Moderate / High
	Aquatic Ecology / Habitats	High
Context	Modification of land form and land cover	Moderate / Low
Study Reach	Perceptual / Experimental	Moderate
Overall level of Natural Character		Moderate

LANDSCAPE	
ATTRIBUTE	LANDSCAPE RATING
Biophysical	Moderate
Sensory	High
Associative	High

Very High High **Moderate** Low Very Low



Willow plantings constrain the active braidplain.

Summary

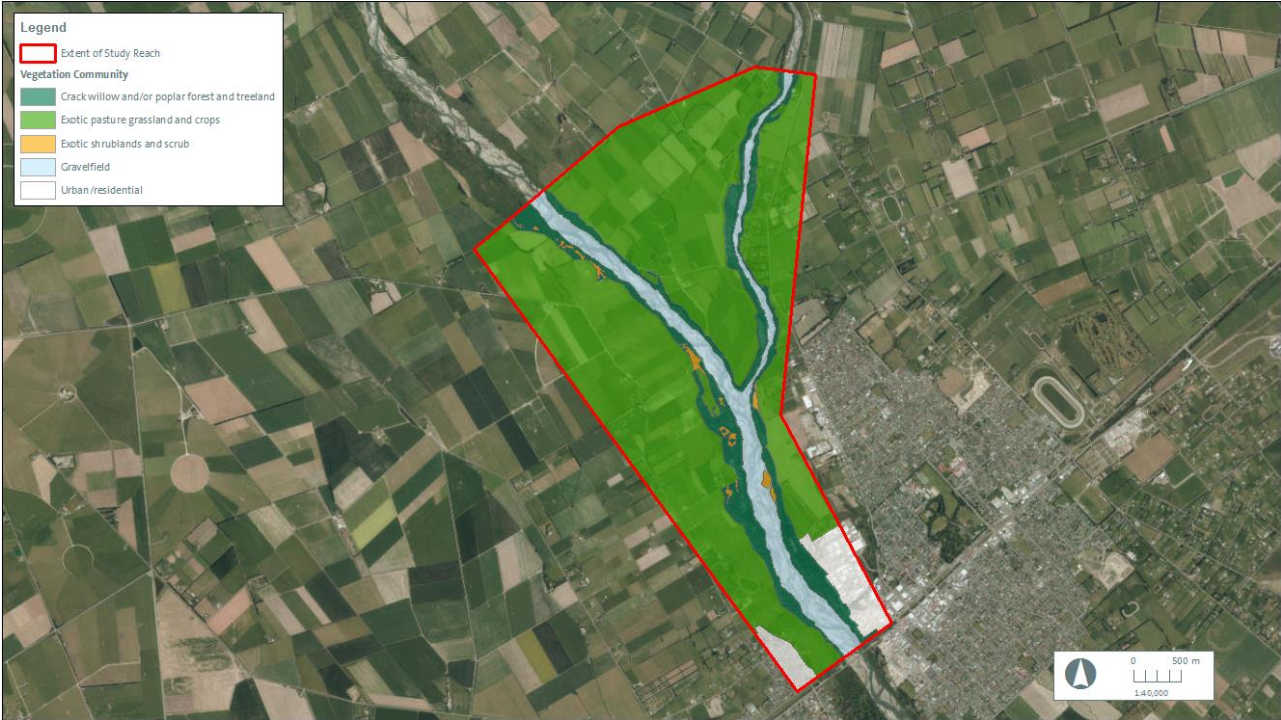
- The braidplain extends beyond the active channels and bed
- Level of natural character is Moderate
- The level of natural character is reduced by;
 - Physical modification of the braidplain
 - Flow regime – abstraction
 - Water Quality

Ecology

Methodology

- Desktop review
 - Technical reports and literature
 - Databases – GIS spatial data
 - Aerial photographs
- High-level site investigations
 - High-level surveys of:
 - Terrestrial vegetation and habitats
 - Aquatic habitats within braidplain (river and lateral aquatic habitats)
 - Observations of fauna
- Mapped extent of ecological features





Ecological Values

- Special Site of Wildlife Interest; Wetland of Ecological and Representative Importance; Area of Significant Nature Conservation Value
- Active riverbed: some modification (4WD, recreation)
- Modified hydrological regime
- “Excellent” stream health – QMCI
- Immediate margins, dominated by crack willow and poplars
- Fish fauna typical of Canterbury braided rivers, 3x nationally At Risk fish species
- High no. and diversity of river birds, 13x Threatened & At Risk species
- Breeding habitat large no. black-billed gulls
- Important habitat for terrestrial invertebrates and adult aquatic insects

Summary of Findings

- Active riverbed less modified, riparian margins highly modified
- High diversity of aquatic habitats
- Nationally significant habitat for river birds
- Active bed and riparian margins important ecological corridor
- Nationally braided rivers naturally uncommon ecosystems. Threat status of ‘Endangered’.

Recreation

Methodology

- Literature Review
- Local familiarity: In-laws

Values

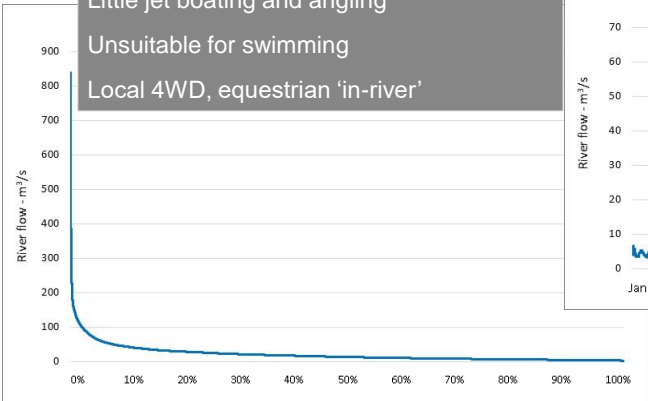
Riverbank focus – mountain biking, running, walking

Access – mostly poor condition

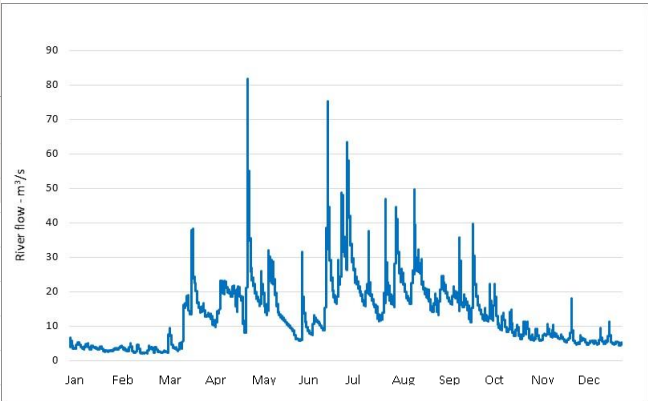
Little jet boating and angling

Unsuitable for swimming

Local 4WD, equestrian ‘in-river’

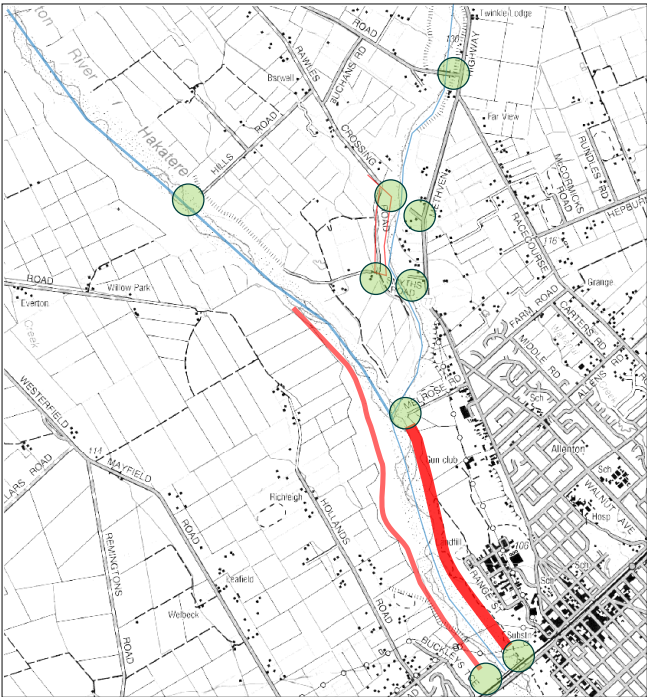


SH1 flow duration, June 2005 to June 2018



Ashburton at SH1 hydrograph for 2015 year

Mean 21.3 m³/s, median 13.2 m³/s



Where those values are

- Riparian activities: mountain biking, cycling, walking, running
- In-river activities: jet boating, angling, 4WD, equestrian
- ECan river access points, including some picnicking

Key Messages

- Water quality and habitat for trout and salmon determinant of in-river recreation value
- Riparian areas growing in popularity for mountain biking, walking, running

