

# Braided River Jet Boating Ltd



Resource Consent Application  
Timaru District Council



Form 9
Application for
Resource Consent or Fast-Track Resource
Consent

Resource
Consent No.

Sections 87AAC, 88 of the Resource Management Act 1991

To Timaru District Council

c/- Ronald and Anna Clearwater

Braided River Jet Boating Ltd 201 Geraldine-Arundel Road, RD 22, Geraldine
[Full name, full address]

apply for the following type(s) of resource consent: Subdivision Consent / Land Use Consent / Fast-track
Consent (Circle one or both)

If the application qualifies as a fast-track application under section 87AAC, please select one of the following:

[ ] I opt out of the fast-track consent process.

OR

[ ] I do not opt out of the fast-track consent process

\*Select one

The activity to which the application relates (the proposed activity) is as follows:

To operate a commercial jet boat service on the Uper Rangitata River catering for two client
groups:
1. WORKBOAT SERVICES for those requiring MaritimeNZ and WorkSafeNZ compliant river
transport (for example, conservation and pest management organisations).
2. Eco-tourism jet boating trips
[Describe the proposed activity]

The site at which the proposed activity is to occur is as follows:

Upper Rangitata River from above the Rangitata Gorge to the confluence of the Clyde and Havelock
Rivers. (detailed more thoroughly in adjoining documentation)

[Describe the site, including—

- (a) its location, as it is commonly known and in a way that will enable it to be easily identified (e.g., the street address, the legal
description, the name of any relevant stream, river, or other water body to which the application relates, proximity to any well-
known landmark, the grid reference (if known)); and
(b) its natural and physical characteristics and any adjacent uses that may be relevant to the consideration of the application.]

The full name and addresses of each owner or occupier (other than the applicant) of the site to which the
application relates are as follows:
NZ Government

[List full names and addresses]

Please select **one** of the following:

There are no other activities that are part of the proposal to which this application relates.

**OR**

The other activities that are part of the proposal to which the application relates are as follows:

.....  
.....  
.....

*[Describe the other activities that are part of the proposal to which the application relates. For any activities that are permitted activities, explain how the activity complies with the requirements, conditions, and permissions for the permitted activity so that a resource consent is not required for that activity under section 87A(1) of the Resource Management Act 1991.]*

Please select **one** of the following:

No additional resource consents are needed for the proposal to which this application relates.

**OR**

The following additional resource consents are needed for the proposal to which this application related and have/have not\* been applied for:

.....  
.....  
.....

*[Give details] \* Select one*

I attach an assessment of the proposed activity's effect on the environment that—

- a) includes the information required by clause 6 of Schedule 4 of the Resource Management Act 1991; and
- b) addresses the matters specified in clause 7 of Schedule 4 of the Resource Management Act 1991; and
- c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

I attach an assessment of the proposed activity against the matters set out in Part 2 of the Resource Management Act 1991.

I attach an assessment of the proposed activity against any relevant provisions of a document referred to in section 104(1)(b) of the Resource Management Act 1991, including the information required by clause 2(2) of Schedule 4 of that Act.



If the application is affected by section 124 or 165ZH(1)(c) of the Resource Management Act 1991 (which relate to existing resource consents), specify the value of the investment of the existing consent holder.

OR

N/A

If the proposed activity is to occur in an area within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011, attach an assessment of the proposed activity against the resource management matters set out in the relevant planning document.

I have attached an assessment as required above; OR

N/A

**Subdivision only**, I attach information that adequately defines the following:

- the position of all new boundaries; and
- the areas of all new allotments; and
- the locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips; and
- the locations and areas of any existing esplanade reserves, esplanade strips, and access strips; and
- the locations and areas of any parts of the bed of a river or lake to be vested in the territorial authority under section 237A of the Resource Management Act 1991; and
- the locations and areas of any land within the coastal marine area (which is to become part of the common marine and coastal area under section 237A of the Resource Management Act 1991); and
- the locations and areas of land to be set aside as new roads.

If the application relates to reclamation, attach information that shows the area proposed to be reclaimed, including its location, the position of all new boundaries (if practicable), and the portion of the area (if any) to be set aside as an esplanade reserve or esplanade strip.

I have attached information as required above; OR

N/A

I attach the following further information required to be included in this application by the District Plan, the Regional Plan, the Resource Management Act 1991, or any regulations made under that Act.

.....  
.....  
.....  
.....

*[List all further documents that you are attaching].*

**Compliance with the Requirements of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health:**

Is an activity described on the Hazardous Activities or Industries List (HAIL) currently being undertaken on the piece of land to which this application applies?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Has an activity described on the HAIL ever been undertaken on the piece of land to which this application applies?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is it more likely than not that an activity described on the HAIL is being or has been undertaken on the piece of land to which this application applies?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>If no 'Yes' to any of the above, you do not need to answer the five questions in the following table.</b>	
<b>If 'Yes' to any of the above, please answer the following questions:</b>	
1. Is the activity you propose to undertake removing or replacing a fuel storage system or parts of it?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2. Is the activity you propose to undertake sampling soil?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3. Is the activity you propose to undertake disturbing soil?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4. Is the activity you propose to undertake subdividing land?	Yes <input type="checkbox"/> No <input type="checkbox"/>
5. Is the activity you propose to undertake changing the use of the land?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>If also 'Yes' to any of the above five activities, then the NES for Assessing and Managing Contaminants in Soil to Protect Human Health is likely to apply.</b>	

The NES for Assessing and Managing Contaminants in Soil to Protect Human Health along with the HAIL list is available on [www.mfe.govt.nz](http://www.mfe.govt.nz).

To establish whether the site is, or will be, classified as a HAIL site, I have (please tick one or both):

- Used the most up-to-date information as described in Regulation 6(2) of the NES; **OR**
- Attached a Preliminary Site Investigation Report, as described in Regulation 6(3) of the NES in the application.

**Describe** how the HAIL information has been obtained, from local authorities or a certified professional:

.....  
 .....

(attach correspondences, if any):

  
 Signature (Applicant/person authorised to sign on behalf of applicant\*)

12/10/2018  
 Date

A signature is not required if the application is made by electronic means.

\*Select one

**Contact Details**

**For correspondence during the consent**

**process:**

Contact Person: Ronald Clearwater

*(Name and designation, if applicable)*

Electronic Address: info@BraidedRiverJetBoating.co.nz

Postal Address: 201 Geraldine - Arundel Rd, RD 122, Geraldine

*(Or alternative method of service under section 352 of the Act)*

Telephone: 027 28 66 831 ↓

Mobile: 03 693 8168 ↓

*Note an electronic address for service must be provided if you are applying for a fast-track resource consent application.*

**For Monitoring of consent:**

Contact Person: as above

Electronic Address: .....

Telephone: .....

Mobile: .....

**For the applicant:**

Name: as above

Electronic Address: .....

Telephone: .....

Mobile: .....

**Notes for the Applicant**

- You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.
- You may apply for 2 or more resource consents that are needed for the same activity on the same form.
- You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991 (if any).
- Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement.
- A fast-track application may cease to be a fast-track application under section 87AAC(2) of the Act.

# CONTENTS

---

CONTENTS.....	7
DESCRIPTION OF PROPOSAL .....	10
Introducing Braided River Jet Boating .....	10
PROPOSED ACTIVITY .....	10
Geographical Description of Area of Operation .....	10
Client Groups .....	10
Scale of Operation.....	11
Trip numbers.....	11
Length of Each Trip .....	11
Hours of Operation .....	11
River Access.....	11
Area of Impact.....	11
A Personal Comment from the Braided River Jet Boating Team .....	11
DISTRICT PLAN .....	12
Rural zones.....	12
Existing Rules (Rule 6.20) .....	12
ASSESSMENT OF ENVIRONMENTAL EFFECTS .....	12
POSSIBLE EFFECTS ON RIVERBED NESTING BIRDS.....	12
Mitigation Measures and Positive Effects on Riverbed Nesting Birds.....	14
Possible Effect on Riverbed Nesting Birds Conclusion.....	15
OTHER POSSIBLE EFFECTS ON BIODIVERSITY .....	15
Riverbed flora and fauna .....	15
Aquatic flora and fauna.....	15
Effect on Salmon and Trout .....	15
Didymo and Other Aquatic Pests .....	17
Other Possible Effects on Biodiversity Conclusion.....	17
POSSIBLE EFFECT ON WATER QUALITY .....	17
Exhaust Discharges .....	17
Refuelling and Bilge Water.....	17
Human Waste .....	18
Possible Effect on Water Quality Conclusion.....	18
POSSIBLE EFFECTS ON LANDSCAPE VALUES. ....	18

Possible Effects on Landscape Values Conclusion .....	18
POSSIBLE EFFECTS ON RECREATIONAL, SAFETY AND AMENITY VALUES.....	19
A    Passive Users.....	19
B    Active Users.....	19
Public Safety.....	21
Safety of Clients .....	21
OTHER CONSIDERATIONS .....	22
Boat Wakes .....	22
Structures and Moorings .....	23
Rubbish .....	23
NOISE .....	24
Timaru District Council Plan: Rural Zones .....	24
Noise Assessment .....	25
Noise Test Results Summarised .....	26
EFFECTS ON THE WIDER COMMUNITY .....	27
Workboat Services .....	27
Local Businesses .....	28
Positive Tourism.....	28
Braided River Environment.....	28
Emergency Services .....	28
CONSULTATION WITH AFFECTED PARTIES .....	29
Summary of Affected Party Responses.....	29
Properties Adjoining the Proposed Operating Area: .....	29
1.    White Rock Station.....	29
2.    Stew Point Station.....	30
3.    Rata Peaks Station.....	30
4.    Harper Lodge.....	31
5.    Graeme & Raewyn Larcombe .....	31
6.    Ben McCleod .....	32
7.    Forest Creek Station.....	32
8.    Mesopotamia Station.....	33
Other Affected Parties: .....	33
Rangitata Rafts Ltd.....	33
LandSAR .....	34



Central South Island Fish and Game .....	34
Supporting Statements .....	38
Department of Conservation (DoC) .....	38
Te Runanga O Arowhenua .....	41
Jet Boating New Zealand.....	44
Upper Rangitata Gorge Landcare Group .....	45
Back Country Trout .....	45
Environment Canterbury .....	46
APPENDICES .....	48
1 Proposed Activity Area (Map).....	49
2 Check, Clean, Dry Protocol.....	51
3 Commercial Jet Boat Operators Certificate .....	52
4. Commercial Jet Driver Licence .....	53
5. Noise Testing Methods .....	54
SOUND TESTING PARAMETERS.....	54
SOUND TESTING SITE PLAN.....	55
Sound testing notes and observations.....	56
Noise Testing Results Graphs.....	57

A Resource Consent application is being submitted to both Timaru District Council and Ashburton District Council due to the proposed activity taking place on a shared boundary.

# DESCRIPTION OF PROPOSAL

---

## Introducing Braided River Jet Boating

Braided River Jet Boating (BRJB) is a small company, owned and operated by Geraldine locals – Ronald & Anna Clearwater. Established in 2018 BRJB has been providing workboat services and low-key tours on the Waitaki River and now seeks to operate also on the Upper Rangitata River.

## PROPOSED ACTIVITY

To operate a commercial jet boat on the Upper Rangitata River.

## Geographical Description of Area of Operation

(See Appendix 1 for map). That section of the Upper Rangitata River from the top of the Rangitata Gorge (NZMS 260 J36 Grid ref 636174) to the confluence of the Havelock and Clyde Rivers (NZMS 260 J36 Grid ref 355399). A distance of approximately 38 km.

The part of the river above Red Rocks also known as Turn Again Bend (NZMS 260, J36, Grid ref 515208) will not be boated between March and July (inclusive) as per Timaru District Plan Rule 6.20.2.1(4) unless it is involved in search and rescue, scientific research, or resource management monitoring as per Timaru District Plan Rule 6.20.2.1(1).

River conditions will determine how far up the river can be practically and safely boated on any given day. Generally trips will operate from the upper end of the gorge to the bluffs opposite Forest Creek.

## Client Groups

This service will cater for two classes of client groups:

- i. **Workboat Services** for conservation and pest management organisations and anyone else who may need WorkSafeNZ and MaritimeNZ compliant river transport on the Upper Rangitata River (Recent MaritimeNZ and WorkSafeNZ law changes require any person travelling on a freshwater waterway in a paid or reward capacity, including volunteers, to travel in a commercially certified vessel with a commercially licensed driver). These trips will be infrequent and variable in length.
- ii. **Eco-tourism**, offering MaritimeNZ compliant jet boating trips. These will not be a thrill-type experience but will focus on the history, natural values, and environmental aspects of the Upper Rangitata. Due to the remoteness of the area only low volumes are expected. Trip numbers will likely not exceed an average of 40 trips per month (see Trip Numbers below).

## Scale of Operation

Braided River Jet Boating has purchased a craft which is very similar to the recreational craft that already frequent the Upper Rangitata River, with the intention of operating in a low-key way, with no obvious commercial presence on the river.

## Trip numbers

It is likely that few trips will be made in the May-September period, however, given the term of the consent and to allow for the growth of the business, application is being made for an average of 40 trips per month. Annual total 480 trips.

## Length of Each Trip

Trips will generally consist of one passage up and down a section of the river, depending on river and weather conditions, and the nature of the trip. The jet boat running time allowed for is 1 hour per trip for Class (ii) client trips. Class (i) client trips will be of varying length, depending on their purpose and requirements.

## Hours of Operation

Application is being sought to allow operation between the daylight hours of 7am-7pm. However, in actuality, a boat will be operating on the river for a very small portion of this time.

## River Access

The boat is trailered to the launch site. River access will be at Red Rocks adjacent to Rata Peaks Station.

2-6 passengers will be carried per trip requiring 1-2 vehicles/trip to transport passengers to the river. Vehicles and trailer will be parked at the launch site.

The boat trailer, which doubles as a jetty, will be used to enable passengers to board the boat. No structures or moorings are required.

## Area of Impact

The operation is based on using a jet boat on the river itself. The boat will be launched on the riverbed, and proceed on the river. There will be no effect from the operation on riparian vegetation, other than work carried out for weed control or conservation by clients in Class (i) (see Client Groups above).

## A Personal Comment from the Braided River Jet Boating Team

“It’s probably hard to explain but whatever your first thought about commercial jet boats, I encourage you to think the opposite. We are not Shotover Jet or Thunder Jet. What those guys do is great, but it’s not what we want to do on the Rangitata River. We do not want to run a large boat with ‘let’s see if we can scare these guys to death’ type trips. Instead we want our guests to share in the type of boating our family enjoys, seeing amazing places, learning about the area, stopping to admire the view and growing in appreciation of the resource entrusted to us. We know that the Upper Rangitata River is valued by many, ourselves included, and it is our intention to operate in such a way as to cause no detrimental effect to the environment, neighbours or other river users.”

# DISTRICT PLAN

---

**Matters relating to this application are found in District Plan Part B and Part D:**

## **Rural zones**

The area under consideration is in R1 and R5. (See Appendix 1 for a map of boundaries relating to this proposal.)

The Objectives and Policies in DP 1 (Rural Zones) and DP2 (Natural Environment) are carried forward into DP 3 (Activities on the Surface of Water). Part 12 (Noise) is assessed in terms of the Rural Zones noise levels in the plan.

The assessment below identifies the issues and assesses their impact with respect to the District Plan.

## **Existing Rules (Rule 6.20)**

***Permitted Activity: Use of motorised craft on the Rangitata River at any time other than above the Red Rocks also known as Turn Again Bend (NZMZ 260, Sheet J36, Grid Reference 515208) between March and July (inclusive) or where used as part of a commercial activity. Commercial activities are Discretionary.***

# ASSESSMENT OF ENVIRONMENTAL EFFECTS

---

## **POSSIBLE EFFECTS ON RIVERBED NESTING BIRDS**

The main species involved are the wrybill, black-fronted tern, black-billed gull, banded dotterel, pied oyster catcher and black & pied stilts, some of which are 'threatened or at risk' species. These species nest in Canterbury's braided riverbeds from September until typically around early January. If a flood washes out their nests, or nests are lost through other causes early in the season, they generally re-nest and try again. This means that the nesting season through to fledging can extend as late as the end of January. However, the later nests tend to be less successful and the main nesting season is usually over by the middle of December.

Concerns have been raised that jet boats may put these species at risk due to wakes washing out nests and washing away unfledged chicks. Disturbance of nesting birds by passing boats has also been identified as a possible threat. However, studies of the effects of jet boats (Hudson, 2004) suggest that the aquatic birds of the main jet boating rivers around Queenstown do not appear to be greatly disturbed by frequent jet boat travel in close proximity to their nesting, roosting and feeding areas. That review indicates that the wakes are not sufficient to reach nests, unless the nest was very close to the river (which can occur especially for stilts, gulls and



terns), in which case it would be lost in quite minor rainfall events causing flow increases. Equally, there is no evidence to suggest that the wakes have caused loss of chicks through being washed away.

Hughey (2011) undertook a comparative risk assessment process comparing the risks to birds posed by jet boating, walking (primarily for angling) and 4-wheel driving and found both of the latter to be of much more concern than jet boating.

The primary threats to nesting birds identified (see for example, Keedwell 2004) are:

- a. Floods. Physical destruction of nests. However floods also perform an essential job of removing riverbed vegetation and maintaining habitat.
- b. Predation. Mammalian predation by stoats, weasels, ferrets, rats, cats and hedgehogs eating eggs is well documented and identified as a major risk. Less well documented but very significant is avian predation, particularly by black-backed gulls and harrier hawks.
- c. Activities that effect the riverbed environment. Water abstraction, damming, and weed ingress into the riverbeds. Weeds not only reduce habitat but provide cover for predators.
- d. Nest disturbance. If the adult birds are off the nest for too long on a hot or cold day, the embryos may die. This may be caused by people staying in the area for extended periods of time, for example, fishermen, and picnickers.
- e. Nest destruction. Physical destruction by 4WD vehicles, other all-terrain vehicles (ATVs) and trail bikes is also documented. Wrybills, black-fronted terns and banded dotterels tend to nest on riverbed elevated above the channels but adjacent to them. This is the normal route used by vehicles driving up and down the rivers. Cattle on riverbeds have the same result.

Hughey's (2011) analysis of the significance of human activities on the birdlife of braided rivers found that:

- a) ***Jet boating is a low risk to river birds***
- b) ***There are multiple risk reduction options all of which will be effective in reducing any effects from jet boating.***

**References:**

*Environment Canterbury Report No. R15/153 -Jet Boating on Canterbury Rivers -2015. Rob Greenaway (Rob Greenaway & Associates), Rob Gerard (Jet Boating New Zealand), Ken Hughey (Lincoln University)*

*Hudson, H.R. 2004. A review of the environmental effects of jet boating. EMA 2004-05, report for Jet Boating New Zealand. Environmental Management Associates, Christchurch, 40 pages.*

*Hughey, Ken. 2011. A comparative risk assessment of jet boating in relation to native birds on Canterbury braided rivers. Unpublished report prepared for the NZ Jet Boating Association. Department of Environmental Management, Lincoln University*

*Keedwell, R.J. 2004. Use of population viability analysis in conservation management in New Zealand. Feasibility of using population viability analysis for management of braided river species. Science for Conservation 243. Department of Conservation, Wellington.*

## Mitigation Measures and Positive Effects on Riverbed Nesting Birds

Following consultation with the Department of Conservation (DoC) (See Consultation with Affected Parties/Supporting Statements), the applicants propose to initiate the following measures to further reduce possible risk during the nesting season (assuming it is safe and practical to do so):

- a. Load and drop off sites will be limited to sites with minimal bird impacts.
- b. Channels adjacent to Black-Billed Gull and Black-Fronted Tern colonies will be boated past on the plane to avoid unnecessary disturbance.
- c. Refrain from stopping or disembarking near known nesting sites during the nesting season. The exception to this will be for Class (i) clients (see Client Groups above) involved in research and protection of endangered bird species. In such cases the boat driver will be guided by the client's requirements and recommendations.
- d. Noise-reducing measures have been put in place. The boat has water injected exhausts, and an external wet muffler system has been added to further reduce noise. (While recreational boats typically have water injected exhausts, the external muffler system is an additional noise reducing measure). See also NOISE section.

Braided River Jet Boating has also agreed to:

- e. Assist DoC with the monitoring of braided river birds in the Upper Rangitata River and/or support a scientifically robust monitoring programme by an appropriate bird expert to assess the effects of jet boating.
- f. Assist with predator control and population monitoring on the Upper Rangitata River.

Points (e) and (f) may be in a paid capacity.

- g. Maintain open communication with DoC bird specialist, Brad Edwards, to ensure that no action of Braided River Jet Boating causes significant adverse effect to the population and breeding success of the endangered and nationally vulnerable black fronted tern and wrybill.

In the event that Points (e) and/or (g) demonstrate a significant negative impact is being caused by the activities of Braided River Jet Boating, Braided River Jet Boating will implement other mitigating measures as appropriate and as mutually agreed by Braided River Jet Boating and DoC. This may include temporarily suspending activities or reducing activity frequency until suitable mitigation measures can be established and put in place.

Positive effects of the proposed activity on river nesting birds may include:

- h. The availability of a MaritimeNZ and WorkSafeNZ compliant boat service to enable safe and easy access to nesting areas for researchers and those managing the riverbed nesting birds' environment.
- i. By educating guests about riverbed nesting birds Braided River Jet Boating will increase awareness of the birds and of the role people can play to ensure their survival, thereby increasing the understanding that braided river birds are worth protecting.

## Possible Effect on Riverbed Nesting Birds Conclusion

**The ability to use jet boat transport in monitoring and protecting these birds is seen as advantageous.**

**The applicants note that the District Plan does not restrict jet boating to protect the birds.**

**It should also be noted that jet boating is a permitted activity.** The RiVAS (River Values Assessment System) study of the Rangitata River estimates recreational user days at 1000/year.

**Reference:** Environment Canterbury Report No. R15/153 -Jet Boating on Canterbury Rivers -2015. Rob Greenaway (Rob Greenaway & Associates), Rob Gerard (Jet Boating New Zealand), Ken Hughey (Lincoln University)

**The impact is assessed as less than minor, and may be beneficial.**

## OTHER POSSIBLE EFFECTS ON BIODIVERSITY

### Riverbed flora and fauna

The operation will not impact on the riverbed flora and fauna, as the jet boat operates on the river. The only impacts on flora can occur when passengers disembark. Note that frequent floods result in an absence of flora on most of the riverbed.

### Aquatic flora and fauna

The passage of a boat can dislodge invertebrates from the bed of the river in shallow water but there is no evidence that this causes any significant impact on their populations.

### Effect on Salmon and Trout

There is a lack of research data to quantify any measurable effects of jet boats on salmon and trout, but there is a plethora of opinion and some anecdotal evidence.

There are several aspects worthy of mention:

- Do passing boats scare fish away so they can't be caught?
  - Mark Taylor of Aquatic Ecology Ltd reports observing trout underwater, not taking any notice of a passing jet boat (pers. comm.).
  - Divers reported that adult salmon holding in deep pools in the Waimakariri River did not move when jet boats passed overhead (MAF 1976 cited in Hudson 2014).
  - Reid (2007) found motorboats and their wakes did not appear to provoke startle responses in juvenile Chinook salmon when boats passed 3m or farther from fish.
- It is a common report from jet boaters that trout are caught in pools immediately after driving the boat over a pool.
- On the other hand, fishermen report giving up fishing due to the presence of jet boats – possibly due to the irritation factor of having to share the river resource more than any real effect on the fishing. (See Active Users/Fishermen for mitigation measures).

### Reference:

Hudson, H.R. 2014. *An evaluation of jet boat and natural river bank erosion in the lower Dart River, New Zealand. Report for Ngāi Tahu Tourism Dart River Jet Safaris. Environmental Management Associates, Christchurch*

*Jet Boating on Canterbury Rivers 2015. Environment Canterbury Report r15/153 Greenaway, Gerard and Hughey.*

*Reid, I.S. 2007. Influence of motorboat use on thermal refuges and implications to salmonid physiology in the lower Rogue river, Oregon. North American Journal of Fisheries Management 2: 1162-1173.*

## Salmon Spawning

The applicants will not be operating above Red Rocks (also known as Turn Again Bend) between 1 March and 31 July as these months are spawning season for salmon and the river is therefore closed to motorised craft. In addition it is an offence under the Conservation Act 1987 to disturb or damage the spawning ground of any freshwater fish, or to disturb or injure the eggs or larvae of any freshwater fish.

Sutherland and Ogle (1975) calculated inter-gravel flow velocities from pressure gradients in three artificial spawning beds in the Ashley River. Subjected to inter-gravel velocities of 0.18 to 0.30 m/s, in gravel-filled tubes in the laboratory, mortality of Chinook salmon eggs occurred. For the worst case scenario (9 day old eggs) this investigation showed the equivalent of multiple overhead jet boats passes may cause 20-40% loss of salmon eggs. Fatalities decrease with depth and for younger and older eggs.

Jet boating NZ has a long established policy of co-operating with the NZ Fish & Game Council and in banning boats from spawning areas as a consequence of this research (Hughey, 2015). However, there is currently no study that evaluates the real impact of the consequences of this policy on a fishery. Given that trout tend to spawn in shallow water at the heads of rivers and in the side streams, it is likely that the majority of the redds are in places that are not accessible to jet boats. The main streams usually have a mobile river base which is not suitable for spawning and is also flood prone.

In summary, jet boats can kill salmonid eggs, but the significance of normal jet boating on a fishery is unknown.

It is also pertinent to note the role of natural processes in egg-to-fry or smolt survival. Quinn (2005) reviewed over 200 published and unpublished estimates for wild or naturally rearing populations of Chinook salmon, and reported a mean egg-to-fry survival of 38% and mean egg-to-smolt survival of 10%.

### References:

*Ogle D.G. 1975. Effect of jet boats on salmon eggs. NZ Journal of Marine and Freshwater . 9(3): 273-282.*

Environment Canterbury Report No. R15/153 -Jet Boating on Canterbury Rivers -2015. Rob Greenaway (Rob Greenaway & Associates), Rob Gerard (Jet Boating New Zealand), Ken Hughey (Lincoln University)

*Quinn, T.P.2005. The behaviour and ecology of Pacific salmon and trout. University of Washington Press, Seattle.*

## Spawning Areas

The most significant spawning areas are in Deep Creek (Mt Potts) and Deep Stream (Mesopotamia). These are both non-boating areas (Environment Canterbury Navigation Safety Bylaw 2016). While spawning may occur in the main stream, it will be in shallow areas. These sites are prone to floods



which destroy the redds and consequently the success rate is expected to be low, and their significance limited.

## Didymo and Other Aquatic Pests

Under the Biosecurity Act 1993, the entire South Island is a controlled area meaning that it is a legal requirement to prevent the spread of didymo and other aquatic pests. Not only that, but waterweeds inhibit the growth of native water plants, reduces fish spawning areas and blocks intake and jet units in jet boats. Therefore the applicants are very keen to see didymo, and other aquatic pests kept out of the Rangitata River.

It needs to be noted that didymo is already present in Deep Creek, a tributary to the Rangitata River, upstream of the proposed operating area.

In order to ensure that the proposed activity does not increase the likelihood of didymo further infesting the Rangitata the applicants follow the Ministry for Primary Industries (MPI) and Environment Canterbury's (ECan) Check, Clean, Dry protocol, even when coming from another water body that is not known to be infected.

CHECK: Boat, trailer and tow vehicle are checked for plant material and any debris is removed.

CLEAN: Boat, trailer and any equipment that has been in the river, is cleaned, inside and out, for at least one minute with an approved cleaning solution. Particular care is taken to ensure the jet boat intake grill, unit and bilge pumps are thoroughly cleaned.

See Appendix 2 for MPI's Check, Clean, Dry protocol for Sporting Event Organisers (and business operators).

## Other Possible Effects on Biodiversity Conclusion

**The proposed activity will not have any significant effect on biodiversity and therefore is compatible with the District Plan.**

## POSSIBLE EFFECT ON WATER QUALITY

### Exhaust Discharges

Commercial jet boats use marinised car motors, so their exhaust discharges are the same as cars. The effects are less than two stroke motors, which have been shown to have little effect on water quality, even in high use areas.

### Refuelling and Bilge Water

In order to prevent any possible water contamination the applicant ensures that:

1. The craft engine is regularly maintained to ensure there are no fuel or oil leaks and the bilge is clean.
2. No refuelling will take place on the river. Both river craft and towing vehicle will be fuelled prior to travelling to the river.

3. Fuel tanks and engine are inside the craft so, if there were to be a leak, it would be contained within the hull.

### **Human Waste**

1. Public toilets are available at Peel Forest on the way to the river.
2. Rata Peaks Station has offered the use of their toilet facilities should any BRJB guests require them.
3. In the event anyone is 'caught short' a bucket toilet will be carried in the boat and any solid waste disposed of later at a dump station.

### **Possible Effect on Water Quality Conclusion**

**The proposed activity will not have any significant impact on water quality and is therefore compatible with the District Plan.**

### **POSSIBLE EFFECTS ON LANDSCAPE VALUES.**

The presence of a commercial jet boat in this vast landscape will not affect landscape values for the following reasons:

- 1 The major impact is the presence of farming activities which occur on both sides of the river.
- 2 Jet boating has been an existing use for the past 50 years, and there is already significant jet boat use in the Upper Rangitata River.
- 3 The jet boat is considered an iconic New Zealand invention and is entirely appropriate in this landscape.
- 4 A jet boat is visually a very small object and its main impact in this context is one of noise (assessed under "Noise").
- 5 Launching Site impacts. Access to the launching site will be on a formed gravel track already in existence. Launching will involve backing the trailer/jetty into the river. It will be removed and parked after launching. There will be no additional visual impact compared to the existing situation, bearing in mind that private jet boating is a significant existing use.
- 6 The presence of 4WD's, fixed wing aircraft, helicopters and other motor vehicles are accepted activities in this area.

### **Possible Effects on Landscape Values Conclusion**

**The intermittent and non-permanent trips proposed will be insignificant additions to the existing level of modification, and comply with the District Plan.**

## **POSSIBLE EFFECTS ON RECREATIONAL, SAFETY AND AMENITY VALUES**

### **A Passive Users**

This group consists of those who are there to experience the backcountry, the scenery, the outstanding landscape and the natural character. The proposed section of river is some 38 km in length. The assessment is therefore whether the visual disturbance caused by the presence of one boat making two trips per day will detract from the experience for other users. Users will only be able to see a relatively small section of the river for the period of time they are there, and it seems unlikely that they will see the boat for more than a few minutes. Indeed, it is more probable that no trips will be observed by most visitors. This needs to be put in context of the existing private jet boat use which is considerably greater than that applied for.

It seems unlikely that the presence of this operation will have any effect on visitors' experience. For many it may well even add to the experience.

### **B Active Users**

The existing recreational users are other jet boaters, 4 wheel drive users, trampers and anglers. The river is occasionally paddled by kayakers, and is not generally used for rafting except below the commercial launch site on Stew Point Station (See Rafting and Public Safety below).

Local Maori use the area for the gathering of mahinga kai.

### **Te Runanga o Arowhenua**

It is understood that eels and watercress are still significant mahinga kai in the Upper Rangitata. However, according to Tipa & Associates (Cultural Values for the Rangitata Catchment. November 2015. Prepared by Tipa & Associates. Pages 17-20) whanau gather from the backwaters of streams, wetlands, drains and the lagoon –none of which are in the proposed area of operation. Therefore this activity will have negligible impact on areas of mahinga kai in the Upper Rangitata and no negative impact on Iwi access to these areas.

After consultation with Te Runanga O Arowhenua the following measures were agreed to:

1. Braided River Jet Boating will not provide information to its passengers about the historic or cultural significance of the Rangitata River unless that information has been approved by Te Runanga o Arowhenua.
2. Total trips are to be limited to a maximum of 6 per day and 480 per year, with no more than 10 passengers per trip.
3. Braided River Jet Boating agrees to take the utmost care and consideration around the river islands and banks.
4. Braided River Jet Boating will avoid creating unnecessary wash that breaks on either exposed gravel islands or into riparian vegetation.
5. If notified in writing by Te Runanga o Arowhenua, Braided River Jet Boating will for a period of 2 weeks, avoid, or if unable to avoid, slow and stay in mid channel any nominated reach to enable Te Runanga o Arowhenua to undertake any customary

activity. The purpose of this limitation is to enable Te Runanga o Arowhenua to use, access, or otherwise enjoy a reach of the Rangitata River with the minimum of disturbance.

### Other Jet Boaters

Jet Boating NZ has been consulted as representative of recreational jet boaters. They do not believe that the proposed operation will impact on private jet boaters using the river. (See Consultation with Affected Parties/Supporting Statements).

### 4 Wheel Drive Users

Four wheel drivers operate on the riverbed and banks, only occasionally crossing the river. There is no safety issue as visibility in the Upper Rangitata River is excellent with good sight lines, open corners and a wide open river valley. The majority of 4WD use occurs above the confluence of the Havelock and Clyde Rivers, which is outside the proposed activity's area of operation.

### Trampers

**Te Araroa Trail.** The Te Araroa Trail advises trampers: "Further south, the large and braided Rakaia and Rangitata rivers pose a natural barrier to Te Araroa's trampers. Te Araroa Trust has declared these rivers safety zones that do not form part of the trail proper, and would not normally be crossed on foot. Through-trampers must find their own way across or around by mechanical means or otherwise and to do so is not regarded as compromising the integrity of the tramp. Do not attempt to cross the Rangitata without taking a lot of advice and checking river flow levels. For those who attempt it at low summer flows the usual crossing point is above the confluence of the Potts River. Te Araroa trampers resume and leave the Valley via Bush Stream".

The proposed activity poses no safety issue to trampers who choose to cross the river on foot as visibility is excellent (see 4WDs above).

**Other Trampers.** There are no tramping tracks on the river bank on either side of the river in the part proposed by this application. Trampers in this area will usually start at the end of the Rangitata Gorge Road and head south, away from the river.

Consequently there will be little or no impact on trampers.

### Fishermen

Central South Island Fish and Game (CSIFG), and fishing guide Kevin Payne (Former CSIFG councillor, President of Fly Fishing NZ (2012-17), Executive Committee Member (2017-present), Owner/Operator of Back Country Trout (est. 1998)), were consulted regarding the impact of the proposed operation on fishing. CSIFG has approved this proposal as an Affected Party. (See Consultation with Affected Parties/Supporting Statements for Kevin Payne's comment.)

As per the Timaru District Plan (Rule 6.20), the applicants will not be operating above Red Rocks (also known as Turn Again Bend) between 1 March and 31 July as these months are spawning season for salmon and the river is therefore closed to motorised craft.



While anecdotal evidence abounds regarding the effect of jet boats on fishermen (claiming both detrimental and positive effects), there is no quantifiable evidence either way.

*(Environment Canterbury Report No. R15/153 -Jet Boating on Canterbury Rivers -2015. Rob Greenaway (Rob Greenaway & Associates), Rob Gerard (Jet Boating New Zealand), Ken Hughey (Lincoln University))*

Any disturbance caused by the jet boat will be temporary and of short duration.

Braided River Jet Boating will mitigate any impacts by:

1. Where it is practical and safe to do so, take an alternate stream to that being fished.
2. When there is no alternate stream, and it is possible to do so safely and practically, stop or pause, wait until the angler has reeled in or indicated for you to proceed, and then pass as far away from the fisherman as possible so as to cause the least possible disturbance to the water they are fishing.
3. Braided River Jet Boating has agreed to provide CSIFG with an annual report of monthly trip numbers. This will be emailed to CSIFG in July each year and will cover the preceding 12 month period.

## Rafting

A commercial white water rafting company (Rangitata Rafts) launches from Stew Point Station, approximately 3.5 km above the gorge. On occasion rafts and the proposed jet boat operation may have to pass. Clear visibility in the proposed area of operation means that both rafting guides and jet boat driver will have sufficient time to respond appropriately. Rangitata Rafts have been consulted in this regard and appropriate protocols have been put in place.

## Public Safety

Safety of trampers, 4WDs, rafters and fishermen have been assessed above. In summary, every endeavour is made to maintain the greatest safe distance possible from other river users, and in accordance with Environment Canterbury's Navigational Safety Bylaw 2016 (Clause 8) the applicants will:

- Navigate as near to the starboard (right) side of the river channel as is safe and practicable
- Upstream travelling vessel will give way to any vessel going downstream

A feature of the river is that it provides excellent visibility, so the presence of other users is easily observed and enables actions to safeguard other users to be made in a timely fashion.

See Consultation with Affected Parties for a supporting statement from Environment Canterbury Navigation Safety Officer.

## Safety of Clients

As commercial jet boat operators the applicants are bound by MaritimeNZ Rule 82. Rule 82 is intended to limit the likelihood and consequences of serious harm to people on board commercial jet boats operating on rivers. It sets safe design and construction standards for

jet boats, sets standards for safety equipment, and establishes safe operating procedures that must be followed by commercial jet boat operators and drivers.

Rule 82 also requires drivers to hold a New Zealand Commercial Jet Driver (River) Licence and to meet the competency requirements of the operation in which they drive. MaritimeNZ routinely inspects jet boats and safety equipment, and audits operations to ensure continued compliance with Rule 82 requirements.

A Commercial Jet Boat Operator Certificate is evidence of continued compliance.

Braided River Jet Boating is compliant with all aspects of MaritimeNZ Rule 82 (See Appendix 3 for Commercial Jet Boat Operator Certificate).

Owner/Operator, Ronald Clearwater holds a New Zealand Commercial Jet Driver (River) Licence. (See Appendix 4). Any additional drivers will be required to be likewise qualified.

As certified MaritimeNZ commercial jet boat operators, Braided River Jet Boating is required to have a Safe Operating Plan (SOP) for each river they operate on. This covers all aspects of boat safety including acceptable river conditions, passenger management and emergency procedures, and is audited by MaritimeNZ annually.

## **OTHER CONSIDERATIONS**

### **Boat Wakes**

Many jet boated rivers in Canterbury are either rock or gravel, and jet boat-induced bank erosion is considered to be negligible or of no significance relative to natural erosion.

In the high energy gravel bed of the lower Dart River, Hudson (2014) examined bank erosion from large twin-engine commercial boats (which generate much larger wakes than the single engine craft operated by Braided River Jet Boating). In bank erosion trials low slope gravel bars, and coarse bed material, were not measurably eroded in multiple boat passes. Passage of jet boats accelerated erosion of a scarp composed of medium gravel in the active channel, but erosion was minor (centimetres) compared with small freshes and floods where metres to tens of metres of erosion occurred.

Continual bend erosion was observed in the absence of jet boat passage.

Erosion of the cohesive river flat banks in the lower Dart River was not evident with multiple boat passes (Hudson 2014). However, bank failures were observed in a small fresh; and bank retreat of 0 to 11.5 m was measured during a single small flood event. Differences in bank retreat are attributed to exposure and flow alignment. Aerial photographs show that over the longer term (1966 to 2013) the cohesive river flats retreated tens to hundreds of metres.

The Dart River Report (Hudson 2014) details a similar riverbed situation to the Upper Rangitata and its conclusion -that jet boat wakes are comparatively low energy and small

events compared to floods, and that natural processes are the most significant factor in bank erosion -summarises the situation.

**Consequently it is assessed that boat wakes will have only a minor effect and meet the requirements of the District plan.**

**References:** Environment Canterbury Report No. R15/153 -Jet Boating on Canterbury Rivers -2015. Rob Greenaway (Rob Greenaway & Associates), Rob Gerard (Jet Boating New Zealand), Ken Hughey (Lincoln University)

Hudson, H.R. 2014. *An evaluation of jet boat and natural river bank erosion in the lower Dart River, New Zealand.* Report for Ngāi Tahu Tourism Dart River Jet Safaris. Environmental Management Associates, Christchurch

## Structures and Moorings

There will be no structures or moorings required as the boat trailer doubles as a mobile jetty.

## Rubbish

The boat driver will be responsible for the removal of any rubbish produced by or on the trip, both onshore and on the water.

## NOISE

### Timaru District Council Plan: Rural Zones

#### 1.4.2 OBJECTIVE

Maintenance of a reasonably quiet rural environment while accommodating periodic intrusions.

*Principal Reason*

*Makes provision for rural activities to operate and generate noise but recognises that the reasonable expectations of rural residential activities cannot be compromised.*

#### 1.4.3 POLICIES

- (1) To provide for a moderate maximum noise level while allowing for reasonable normal seasonal agricultural and forestry use e.g. harvesting machinery.

When deciding whether to grant applications for resource consents Council shall have regard to the nature, frequency and duration of the noise effects, methods of mitigation, and the sensitivity of the surrounding environment, particularly residential areas. In assessing effects on the surrounding environment the avoidance of concentrating noisy activities in any one locality is desirable.

#### 1.4.4 METHOD

- (1) Set performance standards for noise and generally make those activities which are likely to generate high noise levels discretionary activities (see General Rule 6.21).

*Principal Reason*

*Recognises and provides for noisy activities and sets limits on noise emissions.*

### Rural 1

#### Noise

5.22 Subject to 5.23, all activities shall be designed and conducted so that noise levels shall not exceed 50dBA L10 at the notional boundary of the nearest household unit on any other site between 7.00am and 10.00pm on any day, and 40dBA L10 and 70dBA Lmax at all other times.

### Rural 5

#### Noise

5.19 Noise levels shall not exceed 50dBA L10 at the notional boundary of the nearest household unit on any other site between 7.00am and 10.00pm on any day, and 40dBA L10 and 70dBA Lmax at all other times, unless specific noise levels are provided for the activity elsewhere in the District Plan.



L10 The L10 exceedance level, in A-frequency weighted decibels, which is equalled or exceeded ten percent of the total measurement time. See New Zealand Standard 6801:1991 clause 2.2 definition of exceedance level.

Lmax The maximum A-frequency-weighted sound level (dBA Lmax) during a stated time period. See New Zealand Standard 6801:1991 clause 2.1 definition of maximum sound level.

## Noise Assessment

### The Receiving Environment

The active riverbed ranges from about 500 metres to 2 kilometres in width set in a wide valley. There is a road on one side only.

The boat will for the most part be operating at a considerable distance from the riverbanks and a greater distance from the presence of people. Below is a table of permanently occupied dwellings and distances to property river boundary

Property	Approx. Distance to River Boundary	District Council
Mesopotamia Homestead:	2.5 km	TDC
Forest Creek:	1.6 km	TDC
Ben McLeod:	500 m	TDC
Rata Peaks:	880 m	TDC
Stew Point:	600 m	TDC
Whiterock:	935 m	TDC

**Note: All these dwellings are in Rural 1**

All dwellings are more than 500 metres from the river boundary. The proximity of any jet boat is increased depending on the distance from the riverbank to the boat in the river. The wide valley and open riverbed will disperse noise, rather than concentrate as happens in a narrow gorge.

To these distances must be added the distance from the Property boundary to the nearest boatable part of the river. This will vary as the river channels will alter due to flood effects.

**Worst Case Scenario:** The Ben McLeod dwellings are the closest to an existing river channel on the Environment Canterbury GIS maps currently available with a distance of 375 metres, Harper Lodge, which is non-permanent accommodation is 230 metres. Stew Point is 1.2 km from an existing river channel. All properties are screened by trees which will reduce the noise reading.

## Noise Test Results Summarised

For details of testing methods and results graphs please refer to Appendices 5-6.

The applicants undertook noise testing at the Red Rocks launching site to assess compliance and effects. Two basic test formats were used. The noise emissions from the proposed commercial boat were also compared with two common recreational boats (see Appendix 6, A6 and A8).

1. Noise at 25 metres.
2. Noise at 100 metres.

### Noise Readings at 25 metres

#### LAFMax at 25m

Tests showed that the noise as measured from 25 metres had a maximum of 82 dB (see Appendix 6, A4). The application is for 480 trips/yr i.e an average of 1.3 trips/day. The tests showed that it exceeded the rule maximum of 70 dB for a period of less than 20 seconds on each occasion, a total of 40 seconds/trip (1 pass upstream and 1 pass downstream). Very few people (possibly an occasional fisherman) would be as close as 25m to the boat when it passes. Even for people on the riverbed, the effect is transitory and of low impact.

#### LAeq(1 hour) at 25m

The instrument used could only record a maximum of 10 minutes. This produced a 10 minute weighted average of 41.9 dB background noise (see Appendix 6, A9). To simulate the proposed activity, the effect of 1 boat passage in 10 minutes was recorded. This showed a weighted average of 46.3 dB (see Appendix 6, A3).

To examine the one hour standard, a table was prepared:

	10 min	10 min	10 min	10 min	10 min	10 min	60 min. Average
Background	41.9	41.9	41.9	41.9	41.9	41.9	41.9
Single Boat passage	46.3	41.9	41.9	41.9	41.9	41.9	42.6

The ambient background noise measured was below the Plan Standard of 50 dB.

**The effect of 1 boat passage per hour raised the level to 42.6 dB, an increase 0.7 dBm which is still below the 50dBa Plan standard.**

### Noise Readings at 100 metres

**LAFmax at 100 metres.** The maximum level recorded by the boat was 66 dB (see Appendix 6, A10). The 70 dB level was not exceeded on any occasion.

#### LAeq(1 hour) at 100m

Assuming the ambient level is the same as at the 25 metre measurement:

	10 min	10 min	10 min	10 min	10 min	10 min	60 min. Average

Background	41.9	41.9	41.9	41.9	41.9	41.9	<b>41.9</b>
Single Boat passage	66.1	41.9	41.9	41.9	41.9	41.9	<b>45.9</b>

**These tests show that the noise of the boat will comply with the standards at a distance of 100 metres.**

Permitted activities permit the operation of motor vehicles, tractors, farm equipment and recreational jet boats. Motor vehicle warrant of fitness standards specify 85 dBA as a maximum.

## COMPLIANCE WITH DISTRICT PLAN REGARDING NOISE

### *Noise at Notional Boundaries of Properties.*

The tests conducted show that the boat is compliant at a distance of 100 metres. All dwellings are at much greater distances and also shielded by trees. It is unlikely that the boat will be audible at the notional boundaries of the dwellings

L10. This sets the standard not to be exceeded more than 10% of the time. An average boat passage frequency of 1.3 trips per 10 hours show compliance regardless of noise levels recorded.

### *Noise Affecting Other Users.*

The Plan standard of 70 decibels is complied with at a distance of 100 metres. Given the extremely low usage of the riverbed within 100 metres of a boatable channel, and the low frequency of trips, the effect will be less than minor.

### *Noise Summary*

**The noise testing shows the activity to be fully compliant with the District Plan.**

## EFFECTS ON THE WIDER COMMUNITY

### **Workboat Services**

The need for this service became apparent when Jet Boating NZ was approached to supply jet boats and drivers to provide transport for DoC staff and volunteers completing bird surveys and predator control on South Canterbury rivers. Due to WorkSafeNZ and MaritimeNZ regulations anyone providing transport in this capacity must be commercially licensed. Braided River Jet Boating was established to meet this need.

The availability of WorkSafeNZ and MaritimeNZ compliant jet boat drivers and vessel on the Upper Rangitata River will enable organisations, be they volunteer or paid, to safely and easily carry out river-nesting bird surveys, and weed and predator control.

## **Local Businesses**

The applicants have been told many times that there are not enough activities provided locally to encourage visitors to stay longer in the area.

The provision of eco-tourism style tours on the Upper Rangitata will complement existing businesses and benefit not only accommodation providers, but other local businesses, such as retailers, cafes and restaurants, and other activity providers, by providing visitors to South Canterbury with more reason to visit and stay longer in the area.

The applicants have positive relationships with the wider community and existing local tourism providers and intend to work alongside many of these.

## **Positive Tourism**

The applicants believe that the best way to ensure sustainable tourism for New Zealand is to make sure the activities provided are genuine, rather than ‘bums on seats’ type tourism which cares more about profits than providing positive, memorable experiences. New Zealanders are known for their ‘down to earth’ manner and the applicants believe that guests want to experience NZ in a personal way, making connections with New Zealanders and with the environment. It is their goal to ensure that their jet boating trips do just that.

## **Braided River Environment**

The applicants positively promote and profile the braided river environments of Mid and South Canterbury, increasing awareness and appreciation of this iconic landscape by actively participating in its conservation, and by enabling guests to experience this Outstanding Natural Landscape from the river.

## **Emergency Services**

The availability of a MaritimeNZ compliant jet boat on the Upper Rangitata River is another tool able to be used by LandSAR (Search and Rescue) should the need arise.

# CONSULTATION WITH AFFECTED PARTIES

---

The following potentially affected parties have been consulted regarding how the proposed activity may affect them, or their organisation, and where possible their suggestions and mitigation measures have been incorporated into the revised proposal.

## Summary of Affected Party Responses

Gary Rooney	-
Janet Taylor	Supports
Robin Gardenbroek	-
Graeme & Raewyn Larcombe	Supports
Gerald & Louise Aubrey	-
Doug and Mari Harpur	Supports
Malcolm & Sue Prouting	Supports
Rangitata Rafts	Supports
Central South Island Fish and Game	Supports
Department of Conservation	Supports
Te Runanga o Arowhenua	Supports
Jet Boating New Zealand	Supports
Upper Rangitata Gorge Landcare Group	Supports

## Properties Adjoining the Proposed Operating Area:

Numbers for each property relate to their position on the Area of Operation Map (See Appendix 1).

### 1. White Rock Station

Physical Address:	2254 Rangitata Gorge Road R.D. 20 Peel Forest 7990
Owner:	Rooney Farms Ltd Gary Rooney (Director & sole owner of Rooney Group/Rooney Farms)
	Studholme R.D. 10 Waimate Ph: 03 689 6200 Email: c/- <a href="mailto:michelle.heal@rooneygroup.co.nz">michelle.heal@rooneygroup.co.nz</a> (Gary's P.A)
Occupier:	Ross and Sally Stevens Ph: 03 696 3746

White Rock Station is owned by Rooney Farms and is occupied by farm managers, Ross and Sally Stevens.

## 2. Stew Point Station

Physical Address: 2847 Rangitata Gorge Road  
R.D. 20  
Peel Forest 7990

Owner: Rooney Farms Ltd  
Gary Rooney (Director & sole owner of Rooney Group/Rooney Farms)  
Studholme  
R.D. 10  
Waimate  
Ph: 03 689 6200  
Email:c/- [michelle.heal@rooneygroup.co.nz](mailto:michelle.heal@rooneygroup.co.nz) (Gary's P.A)

Occupier: Wayne & Denise Pawsey (Farm manager)  
Ph: 03 696 3706

Stew Point is owned by Rooney Farms Ltd and is occupied by farm managers Wayne & Denise Pawsey.

The applicants have met with and discussed the proposal with Rooney Farms (Gary Rooney; his personal assistant Michelle Heal; and Rooney Farms Corporate Manager Richard Draper).

Rooney Farms Ltd has chosen not to provide written approval.

## 3. Rata Peaks Station

Physical Address: 3229 Rangitata Gorge Road  
R.D. 20  
Peel Forest 7990

Owner Occupier: Janet Taylor and Craig Feaver  
Ph: 03 6963527  
[ratapeaks@farmside.co.nz](mailto:ratapeaks@farmside.co.nz)

The applicants have been in ongoing discussions with Jan and Craig regarding the proposal. They initially had some concerns regarding dogs being brought on Class 1 trips for pest control (hydatids risk) and wanted assurance that Braided River Jet Boating has effective procedures in place to prevent the spread of didymo into the Rangitata River. Both issues have been resolved and Jan and Craig are fully satisfied with the outcome.

Jan & Craig are supportive of the proposal and have provided written approval.



#### 4. Harper Lodge

Physical Address: 3475 Rangitata Gorge Road  
R.D. 20  
Peel Forest 7990

Owners: Robin Gardenbroek and Lewis Grieve

7 Rutherglen Avenue  
Ilam  
Christchurch 8041  
Ph: 03 3588322  
Email: [gardenbroeknz@gmail.com](mailto:gardenbroeknz@gmail.com)

Harper Lodge is non-permanent accommodation, mainly utilised in the October to March period. The applicants have consulted with Robin and he has chosen not to provide written approval.

#### 5. Graeme & Raewyn Larcombe

Physical Address: 3501 Rangitata Gorge Road  
R.D. 20  
Peel Forest 7990

Owner: Graeme & Raewyn Larcombe  
203 Orari River Road  
R.D. 22  
Peel Forest 7992  
Phone 03 6963537  
Graeme: 027 222 5467  
Raewyn: 027 3429444

Occupier: Rented to Rata Peaks Station

The Larcombe's property is currently rented out to a neighbouring farm, however both Graeme and Raewyn continue to work in the Rangitata Valley in their capacity as owner operators of Landcare Services, providing weed and pest control. The Larcombes acknowledged the need for a commercial jet boat in the area to enable better access for pest and weed control and had in fact investigated establishing a commercial jet boat themselves but were put off by the costs involved. Graeme and Raewyn see the provision of a commercial jet boat service as a positive for the area and have provided written approval for the proposal.

## 6. Ben McCleod

Physical Address: 3636 Rangitata Gorge Road  
R.D. 20  
Peel Forest 7990

Owner: Donald & Sue Aubrey

Occupier: Gerald & Louise Aubrey  
Ph: 03 696 3747  
Email: [geraldaubrey@hotmail.com](mailto:geraldaubrey@hotmail.com) and  
[Louise.Aubrey@ballance.co.nz](mailto:Louise.Aubrey@ballance.co.nz)

Ben McCleod is a pastoral lease property operated by the Aubrey family. Donald and Sue are the farm owners, however the business is currently going through a succession process and their son, Gerald and his wife, Louise are running the business. Consultation has therefore been with Gerald and Louise. They have opted not to provide written support.

## 7. Forest Creek Station

Physical Address: 4237 Rangitata Gorge Road (Manager's Residence)  
4439 and 4483 Rangitata Gorge Road (Holiday accommodations)  
4365 Rangitata Gorge Road (Owners' Residence)  
R.D. 20  
Peel Forest 7990

Owners: Mari and Doug Harpur  
5959 Centerville Road  
North Oaks,  
MN 55127  
U.S.A  
Ph: 651 484 3361  
Email: [mari@taoco.com](mailto:mari@taoco.com)

Occupier: Rikki Sinclair  
Ph: 03 6963546

Co-Owner Mari Harper and farm manager, Rikki Sinclair, have both been consulted regarding the proposal. Rikki has verbally stated his support and the Harpers have provided their written approval.

## 8. Mesopotamia Station

Physical Address: 4855 Rangitata Gorge Road  
R.D. 20  
Peel Forest 7990

Owner Occupiers: Malcolm and Sue Prouting  
Ph: 03 696 3738  
Email: [Mesopotamia@ruralnet.co.nz](mailto:Mesopotamia@ruralnet.co.nz)

The applicants have consulted with Malcolm and Sue and they have provided their written approval.

## Other Affected Parties:

### Rangitata Rafts Ltd

Address: 53 Waikari Road  
RD 20  
Peel Forest 7990  
Ph: 03 696 3735

Owners: Johnny and Rose Acland  
Mt Peel Station  
RD 20  
Geraldine 7991  
Ph: 03 696 3707 or 021 705 304

Manager: Darren Hawes  
Email: [info@rafts.co.nz](mailto:info@rafts.co.nz)

The applicants met with Rangitata Rafts owners, Johnny and Rose Acland to discuss the proposal and later with their manager, Darren Hawes to discuss any practical and safety issues related to utilising a shared stretch of river (from Stew Point to the top of the Gorge, approximately 3.5km). Some of the results of these discussions have been included in this proposal as well as additional measures added to each business' Safe Operating Plan (SOP). Rangitata Rafts have provided their written approval.

## LandSAR

Search and Rescue was emailed to inform them of our proposal and how it may benefit them in future search and rescues operation on the Rangitata River and surrounds. At the time of submitting this proposal no response had been received from them. As they will not be negatively impacted by the proposed activity the applicants will wait and follow this up more if and when consent is granted.

## Central South Island Fish and Game

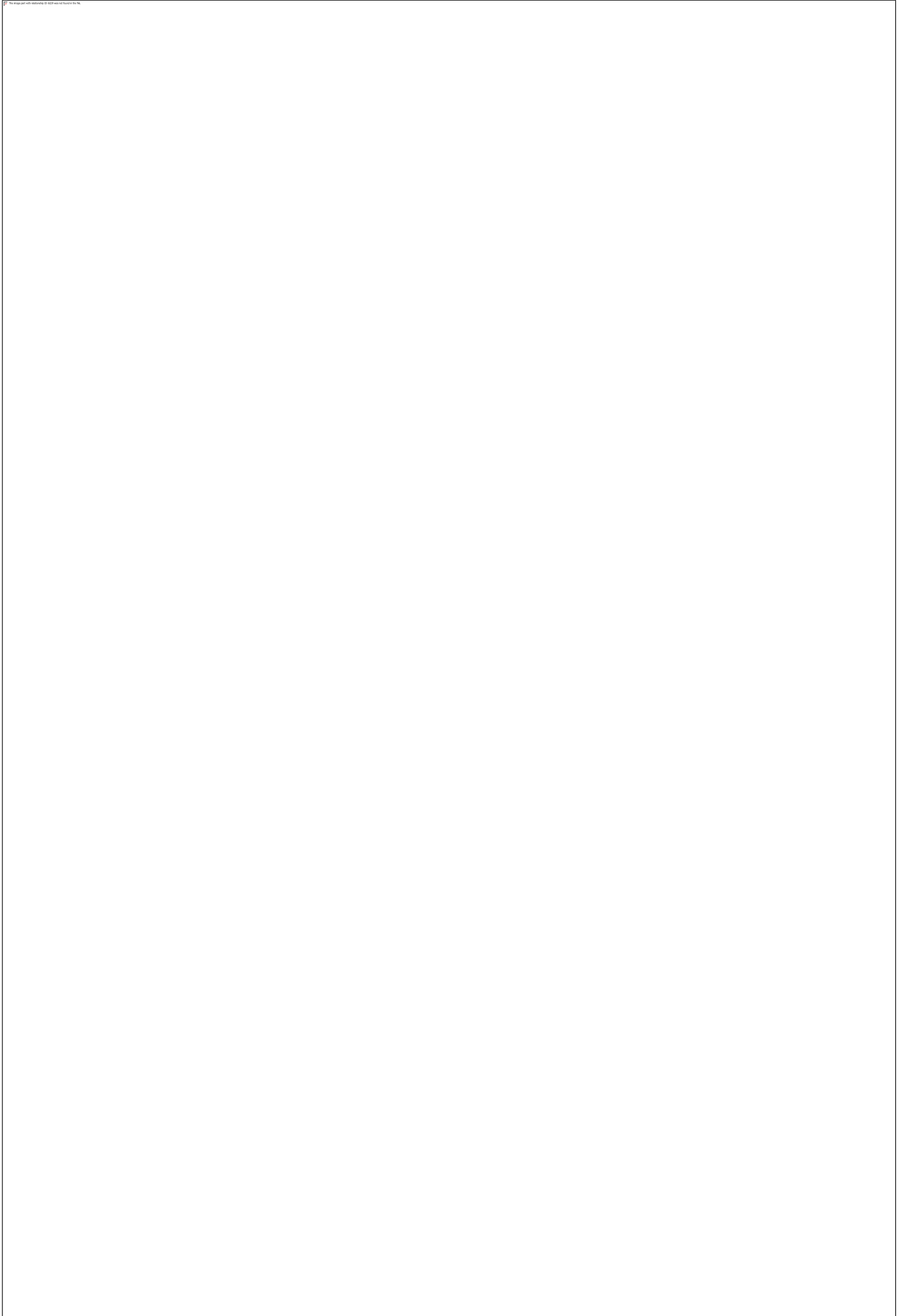
Address: Angela Christensen (Resource Officer)  
32 Richard Pearce Dr Temuka  
Ph: 03 615 8400  
Email: [achristensen@csifgc.org.nz](mailto:achristensen@csifgc.org.nz)

See below for correspondence with Central South Island Fish and Game. Fish and Game have given written approval to the proposal.









The following Affected Parties have indicated that it is not their prerogative to sign Form 8A but they have instead provided us with a statement of support for our proposal.

## Supporting Statements

### Department of Conservation (DoC)

Address: Geraldine Office  
13-15 North Terrace Geraldine  
Ph: 03 693 1010

RMA contact person: Chris Coulter  
Ph: 027 565 8940  
Email: [ccoulter@doc.govt.nz](mailto:ccoulter@doc.govt.nz)

Bird specialist: Brad Edwards  
Ph: 03 693 1075  
Email: [bedwards@doc.govt.nz](mailto:bedwards@doc.govt.nz)

The initial catalyst for establishing Braided River Jet Boating was a request from DoC to provide a Maritime NZ compliant vessel to enable DoC to carry out bird surveys, weed control and predator trapping on the Rangitata and Waitaki Rivers. The applicants have been in ongoing discussions with DoC representatives throughout the development of this proposal to ensure that their activities do not impact negatively on native flora and fauna. DoC suggestions form an integral part of this proposal.

The Department of Conservation is happy with the proposal as it stands, including the mitigation measures that have been put in place. They have informed the applicants that it is DoC policy not to sign Affected Party forms until any conditions imposed by the council in granting the consent have been reviewed by DoC. DoC's area of 'effect' is around wildlife, and braided river nesting birds in particular. The following statement has been supplied by DoC regarding the proposal:

## Braided Riverbed Bird Nesting Upper Rangitata

Comment supplied by the Geraldine District Office Department of Conservation to assist Braided River Jetboating in assessing the probable impacts of their proposed operation.

- The Department of Conservation is currently in year 4 of a landscape scale predator control trial, and a sustained weed control operation, in the Upper Rangitata River between the Rangitata Gorge and the confluence of the Clyde-Havelock Rivers. This area is the same as the applicant's activity area.
- This program is focused on increasing the nesting success of two endemic threatened riverbed nesting birds; black fronted tern (*Chidonias albostratus*: nationally endangered) and wrybill (*Anarhynchus frontalis*: nationally vulnerable) but also including banded dotterel, pied oyster catcher, black stilt, Caspian tern, pied stilt, black billed gull).
- Recruitment (breeding) failure is the primary reason for the ongoing decline in both these species. Predation by mammalian predators, loss of habitat, and flooding, are the dominant reasons for breeding failure.
- Wrybill and black fronted tern breed exclusively on the braided riverbeds in the Eastern and Southern South Island. The Rangitata remains a significant breeding site, in the case of wrybill it has been calculated that 2,300 birds utilise the area -out of a national population of 5,200. The importance and significance of this population is such that it is therefore critical that any impact of jet boating on these species and this population should be less than minor.

Should the application be approved, clear adaptive management conditions will need to be applied, that may include the cessation of the activity if the effects are significantly adverse to the bird population and breeding success.

An information gap exists on the impacts of jet boating activity on wrybill and black fronted tern. In particular, concerns exist around:

- the vulnerability of chicks to wash,
- the impacts of intense jet boat use on foraging behaviour and habitat use, and
- the impacts of jet boating and associated river use on nest/colony establishment, maintenance, and disturbance.

Scientific papers regarding NZ jet boating impacts are often misquoted or unpublished, and tend to be industry supplied. The Department of Conservation is continuing to work with Jet boating NZ to develop research to define what the effects of jet boating on braided river birds will be, and include:

- The impact of jet boating and the associated river use on wrybill and black fronted tern are likely to be very different, one species being a colony nester the other a solitary nesting species.
- Mitigations have been discussed with applicant that may reduce impacts on nesting river birds include;
  - Considering concise limits on activity frequency and noise (eg max number of trips per day/lower noise exhausts)
  - Limiting associated loading, stops and drop offs, to sites with minimal bird impacts
  - Avoidance of all channels adjacent to Black Billed Gull and Black Fronted Tern colonies (which will require ongoing communication with local DOC monitoring team)

Clarifying jet boat impacts on braided river birds; including:

- Assisting with monitoring of the activity and/or supporting a scientifically robust monitoring programme by an appropriate bird expert to assess the effects of jet boating.
- Investigating of offsetting effects by the applicant paying for or assisting with predator control and population monitoring at the site.



**Brad Edwards**

Ranger Biodiversity – Kaitiaki-Kanorau Koiora

Department of Conservation – *Te Papa Atawhai*

DDI: (03) 693 1075 | VPN: 5515

[www.doc.govt.nz](http://www.doc.govt.nz)

## Te Runanga O Arowhenua

Consultant: Aoraki Environmental Consulting Ltd  
Alex MacDonald  
Ph: 027 622 3460  
Email: [alexmacdonald@aecltd.co.nz](mailto:alexmacdonald@aecltd.co.nz)

Te Runanga o Arowhenua have been consulted and results of consultation have already been included in the proposal document. Te Runanga o Arowhenua have given their approval to the proposed activity as evidenced by the following letter from their consultant/representative, Alex MacDonald:

## Aoraki Environmental Consultancy Limited

P.O. Box 885 Timaru 7940

4 October 2018

Ronald Clearwater  
Braided River Jet Boating  
By email braidedriverjetboating@gmail.com

### **Braided River Jet Boating**

Tēnā koe Ronald

Te Rūnanga o Arowhenua understands that Braided River Jet Boating will be seeking consent to operate a commercial jet boating operation between the Rangitata Gorge and the confluence of the Clyde and Havelock Rivers, as described in the AEE.

Representatives of Te Rūnanga o Arowhenua have reviewed the proposal. Te Rūnanga o Arowhenua accepts this proposal provided the following conditions are adhered to:

- The operator does not provide information to its passengers about the historic or cultural significance of the Rangitata River to Te Rūnanga o Arowhenua unless that information has been approved by Te Rūnanga o Arowhenua.
- Total trips are to be limited to a maximum of 6 per day and 480 per year, with no more than 10 passengers per trip.
- Braided River Jet Boating agrees to take the utmost care and consideration around the river islands and banks.
- Braided River Jet Boating will avoid creating unnecessary wash that breaks on either exposed gravel islands or into riparian vegetation.
- If notified in writing by Te Rūnanga o Arowhenua, the jet boat operator will for a period of 2 weeks, avoid, or if unable to avoid, slow and stay in mid channel any nominated reach to enable Te Rūnanga o Arowhenua to undertake any customary activity.

*Advice notes: The purpose of this limitation is to enable Te Rūnanga o Arowhenua to use, access, or otherwise enjoy a reach of the Rangitata River with the minimum of disturbance.*

Given Te Rūnanga o Arowhenua does not have expertise to assess the impact of the proposal on ecological values, including river birds, Te Rūnanga o Arowhenua would like to be forwarded any technical review undertaken by council, and any proposed conditions. If these are satisfactory, Te Rūnanga o Arowhenua does not oppose the proposal being granted on a non-notified basis.

Ngā mihi



**Alex Macdonald**

Environmental Planner

Aoraki Environmental Consultancy Limited

On behalf of Te Rūnanga o Arowhenua

**Disclaimer:**

The content of this letter is only for the purpose of informing and accompanying the Resource Consent Application being applied for by **Braided River Jet Boating – Rangitata River** and remains the intellectual property of Te Rūnanga o Arowhenua, and Aoraki Environmental Consultancy Ltd. Use of this report by the applicant or any other party in any other circumstances (e.g. subsequent applications for other projects) shall be with the written approval of Te Rūnanga o Arowhenua and Aoraki Environmental Consultancy Ltd).



## Jet Boating New Zealand

National President: Paul Mullan  
Ph: 027 284 9194  
Email: paul.mullan@jbnz.co.nz

Jet Boating New Zealand (JBNZ) represents recreational jet boaters throughout New Zealand. The applicants consulted the organisation to find out if they had any concerns that the proposed operation would impact negatively on JBNZ members.

As the applicants are members of JBNZ, (Ronald is the current chairman of the local branch) this request was directed to JBNZ's national body to avoid a possible conflict of interest.

Their response is included below.

On 11/10/2018 10:06 p.m., Paul Mullan JBNZ wrote:

Ronald,

I refer to your request to Paul Vernel, JBNZ's External Relations Manager for our position on your proposed commercial jet boat operation on the Upper Rangitata.

I have discussed your request with the members of the Management Committee and there seems to be no reason why we should object to your running a commercial operation on the Upper Rangitata so long as there was no proposed or consequential action at a subsequent time, that might see the reduction in access to private boaters.

You will appreciate we are an organisation representing the interests of jet boaters and as such we do not want to see their right to boat rivers diminished because of commercial interests and we would reserve the right to shift our position should this be the case.

Good luck with the venture. It's great to see access to some of the special places we are able to visit, being provided to a broader section of the community via commercial operations like this.

Kind regards,

Paul

**Paul Mullan**

*National President*  
Marketing, Media & Communications | Magazine

[www.jetboatingnz.co.nz](http://www.jetboatingnz.co.nz)

027 284 9194

## Upper Rangitata Gorge Landcare Group

Chairman: Laurie Prouting  
Thornycroft  
345 Montalto Road  
RD 8 Ashburton  
Ph: 03 303 6237 or 027 222 5372  
Email: [sumaria193@gmail.com](mailto:sumaria193@gmail.com)

This proposal was sent to the Landcare Group, who then internally distributed it to their members. The applicants then hosted a meeting at a local cafe to allow members the opportunity to discuss the proposal and any concerns they may have. An emailed invitation was also extended to any member who preferred to speak individually with the applicants.

The applicants have been informed of the group's support for the proposal, however members have been encouraged to submit individually as to how the proposal may affect them.

Please note, many members of the Landcare Group are also residents of the valley and were consulted individually as landowners.

## Back Country Trout

Owner Operator: Kevin and Jodi Payne  
103 School Road  
Fairlie  
Ph: 03 6858181  
Email: [flyfishnewzealand@gmail.com](mailto:flyfishnewzealand@gmail.com)

Kevin and Jodi Payne were approached regarding the effect the proposal may have on anglers. Kevin is a former CSIFG councillor, former President of Fly Fishing NZ (2012-17), current Executive Committee Member of Fly Fishing NZ (2017-present), and Owner/Operator of Back Country Trout (est. 1998). Kevin's statement is included below:

To whom it may concern,

We are writing to you to endorse and support the consent application made by Braided River Jet Boating to operate a commercial jet boating service on the upper Rangitata River.

Jodi Payne & myself own Back Country Trout, a professional fly fishing guide service based in Fairlie, Mackenzie District. We are frequent users of the upper Rangitata River for fly fishing purposes, so were contacted by Ronald Clearwater to consult about potential conflicts with trout and salmon anglers - whether it be recreational or commercial.

We feel that any potential conflicts between a jet boat operation and anglers will be minimal, and have full confidence in knowing the character of the operators that utmost courtesy will be shown to other river users.

The total experience of the high country is highly valued by our clients and indeed anglers in general. The solitude and peace is something not to be taken lightly. As the upper Rangitata River is frequently used by jet

boaters (on a daily basis I would guess), a commercial operation on the upper river would have minimal additional impact.

Flyfishing anglers could make use of a jet boat service as a way of getting around the valley to access good holding water.

Regards,  
Kevin Payne  
[www.nzflyfishingguide.com](http://www.nzflyfishingguide.com)

## **Environment Canterbury**

Navigation Safety Officer:

Gary Manch

Ph:0800324636

Email: [Gary.Manch@ecan.govt.nz](mailto:Gary.Manch@ecan.govt.nz)

The Environment Canterbury Harbourmaster's Office was approached to ascertain if they had any concerns regarding the proposal. Their response is included below:



PO Box 345  
Christchurch 8140  
P: 03 365 1828  
F: 03 365 1034  
E: [ec@environment.govt.nz](mailto:ec@environment.govt.nz)  
Customer Services  
P: 03 353 0007 or 0800 334 639  
[www.ecan.govt.nz](http://www.ecan.govt.nz)

11<sup>th</sup> June 2018

To whom it may concern:

I have been asked by Mr R Clearwater to comment on his application in relation to running a commercial jet boating operation on the Upper Rangitata River.

- The Navigation Safety Bylaw 2016 and Controls, part 8 and "Attachment A" specifies speed uplifted zones for the Canterbury Rivers, the Rangitata River, including the Rangitata River lagoon and the tributaries of the Rangitata River are "Speed Uplifted Zones".
- High Speed Jetboating is allowed on the Rangitata River under the Navigation Safety Bylaw 2016 and Controls.
- From a Navigation Safety point of view, I have no concerns about Jet Boats using the Rangitata River provided they comply with the current bylaw and Maritime Navigations rules in place.
- Any vessel used commercially is required to be under the Maritime Operators Safety System ( MOSS) and it is my experience that stringent safety plans and systems are required before approval from maritime New Zealand is issued.

The Harbourmaster's office can only comment on Navigation Safety issues relating to the Navigation Safety Bylaw 2016 and Controls, any requirement under a Regional, District or Local plan outside of this, is the applicant's responsibility to investigate.

Please feel free to contact me if further information is required.



Gary March

Navigation Safety Officer

Harbourmaster's Office

Environment Canterbury



Gary March  
Navigation Safety Officer

Harbourmaster's Office  
5 Norfolk Quay, Lyttelton  
PO Box 345, Christchurch 8140  
[www.ecan.govt.nz](http://www.ecan.govt.nz)

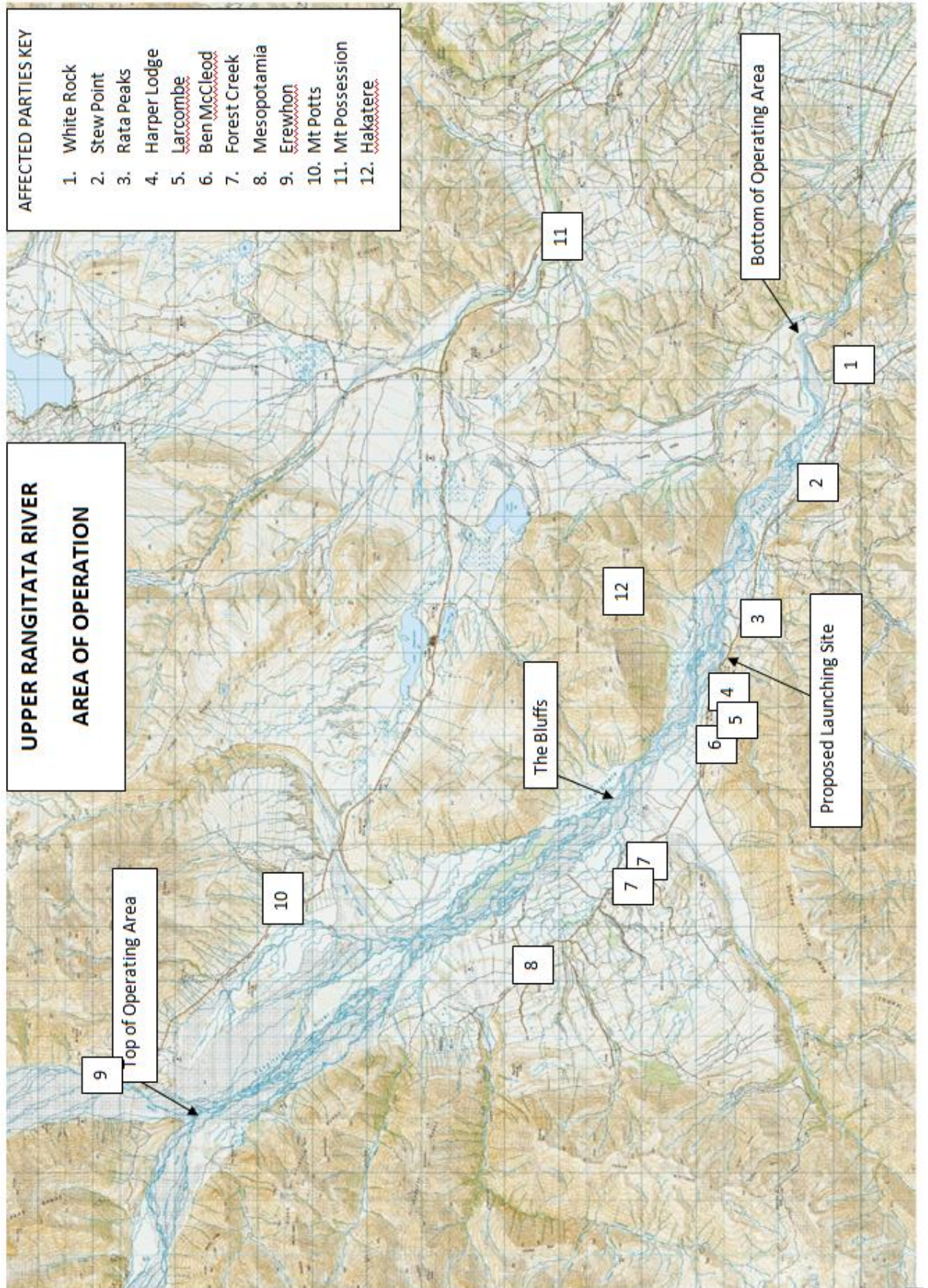
D: 03 367 7339  
F: 03 338 5134  
M: 0274 980 134  
E: [gary.march@ecan.govt.nz](mailto:gary.march@ecan.govt.nz)

# APPENDICES

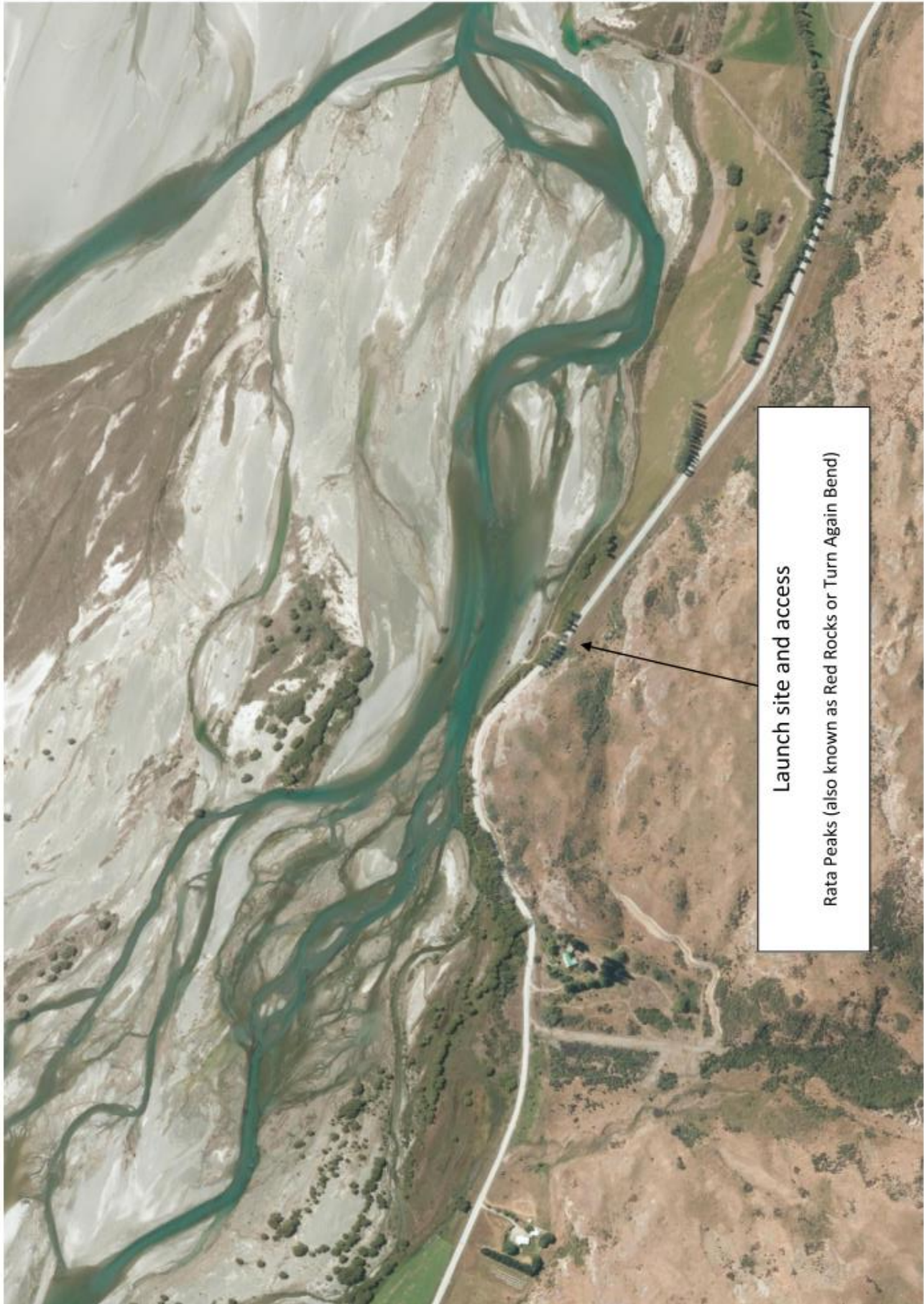
---



# 1 Proposed Activity Area (Map)







Launch site and access  
Rata Peaks (also known as Red Rocks or Turn Again Bend)



## 2 Check, Clean, Dry Protocol

A full version can be seen at [www.mpi.govt.nz/travel-and-recreation/outdoor-activities/check-clean-dry/](http://www.mpi.govt.nz/travel-and-recreation/outdoor-activities/check-clean-dry/)



### DECONTAMINATION METHOD GUIDELINES FOR JETBOATS, JET SKIS AND OUTBOARD MOTOR BOATS

**All boats and trailers** should be thoroughly cleaned with decontamination solution both inside and out for at least one minute.

Special attention should also be given to the following:

**Jet boat grate:** Manually remove any visible plant material from the grate and flush the system with a decontamination solution.

**Jet unit:** Open ball valve at bottom of sand trap, remove any residue and flush system with a decontamination solution.

**Outboard motor:** The cooling system should be flushed out with decontamination solution for the specified time. It can then be flushed again with clean fresh water from a town water supply.

**Boat interior including anchor recess:** Remove excess water by removing bungs then wash the interior with a decontamination solution.

**Bilge pump:** Flush interior with a decontamination solution then use the bilge pump to expel residual water before bungs are opened. This ensures the bilge pump is flushed with the solution, and residual water within the pump will be free of live didymo cells.

**Mats, carpet (including carpet on the trailer), anchor rope and other absorbent components:** Thoroughly soak with decontamination solution allowing extra time for the solution to fully soak through the item.

Thorough drying is an acceptable alternative method, provided all components are completely dry to the touch, inside and out, then left dry for at least another 48 hours before entering a different waterway.



### 3 Commercial Jet Boat Operators Certificate

Braided River Jet Boating currently has a Commercial Jet Boat Operators Certificate for the Waitaki River and will apply to extend this to also cover the Rangitata River if and when consent has been granted.

Appendix 3 Commercial Jet Boat Operators Certificate.pdf



## JET BOAT OPERATOR CERTIFICATE

Issued pursuant to section 41 of the Maritime Transport Act 1994  
in accordance with Part 82 of the maritime rules  
by the Director of Maritime New Zealand

**Owner Name:** Braided River Jet Boating Ltd  
**Address:** 637 Crowes Road  
RD 10  
Waimate 7980

**Operator Name:** Braided River Jet Boating Ltd  
**Operator Address:** 637 Crowes Road  
RD 10  
Waimate 7980

**SOP Number:** J1422

This is to certify that the boat(s) operated by the above operator and listed below has/have been inspected. The operator's safe operational plan has been approved and the jet boating operation has been audited and has been found to be in accordance with the Code of Practice for the Safety of Jet Boats Operating on Rivers prescribed by Appendix 1 of Part 82 of the Maritime Rules.

**Area(s) of operation:**

Waitaki River

**Jet Boat Details:**

MNZ Number	Engine Make	Jet Unit Make	Vessel Name
136415	Chev 350	Hamilton 779	BRJB2

Audit Date: 12<sup>th</sup> December 2017

This certificate is **valid until 12 December 2022** subject to:

- Audits required in accordance with section 54 of the Maritime Transport Act 1994
- The owner and vessel details being kept up to date and the applicable requirements of Part 82 being met.

Issued at WELLINGTON this 23<sup>rd</sup> day of February 2018

**Heather I Allen**  
Senior Advisor Operator Certification  
Acting under delegated authority

Certificate Number: 56626

## 4. Commercial Jet Driver Licence





## 5. Noise Testing Methods

### SOUND TESTING PARAMETERS

DATE: Thursday 21 June, 2018

TIME: Testing carried out from 12-3pm

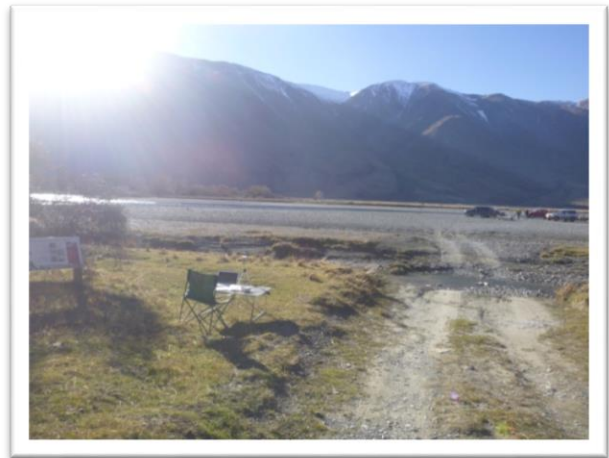
WEATHER CONDITIONS: Clear, sunny day with a very slight breeze from the north.

TESTING LOCATION: Upper Rangitata River at Red Rocks (aka Turn again Bend) which is the narrowest section of river bed.

- Measurements taken at 25m and 100m from the boat, which was travelling on the plane (at usual travel speed, 3000rpm) in a straight line in the centre of the river.
- No obstructions (no trees, large rocks, vehicles, people)

#### TESTING EQUIPMENT:

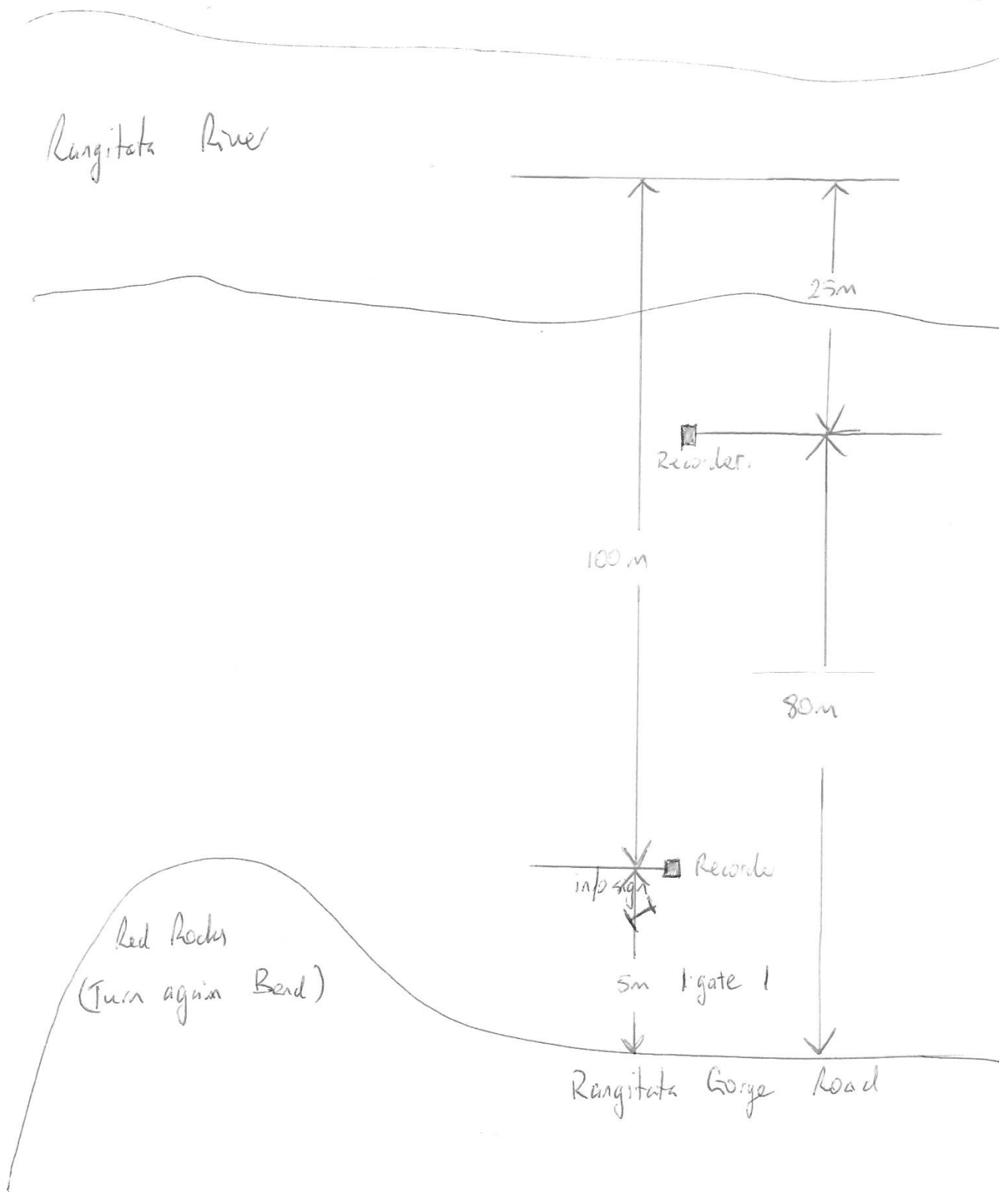
- Benetech Sound Level Meter. Model GM1356
- Designed according to:
  - International electrician committee standard IEC PUB 651 TYPE2
  - US national standard: ANSI S1.4 TYPE2
- Accuracy up to +/- 1.5dB
- Factory calibration, valid until May 2019
- Calibration sound source: 94dB@1KHz
- Measurement range: 30~130dBA
- Meter settings:
  - Frequency Weighting: A
  - Sampling Rate/Response: Fast (8times/second)
  - Position of meter: 1.2m above water level on a tripod at right angles to the river



#### SET-UP:

- 3 boats were tested
  1. BRJB commercial boat
  2. 2x Recreational craft (graphs A6 and A8)
- Both A6 and A8 are examples of commonly used recreational craft with standard set ups to show a comparison between the proposed activity and existing permitted boating activities.
- All 3 boats travelled at the same engine rpm (3000rpm), which is normal planeing speed.
- Unfortunately, due to a setting error on the recording device, the recreational boats were only tested at 25m, however, based on the similarities of their results to the BRJB boat at 25m, we would expect similar results to the BRJB boat at 100m.

### SOUND TESTING SITE PLAN



## Sound testing notes and observations

These notes relate to the graphs included below.

<p><b>A3 BRJB 10 mins with 1 pass @ 25m</b></p> <ol style="list-style-type: none"> <li>1. Boat starts ~200m upstream and heads past the recorder 1x at 25m from the recorder and carries on downstream</li> <li>2. Levels exceed 65dBa for 4secs before boat passes at 90 degrees to recorder, reaches max volume at 2 seconds after boat passes and stays above 65dBa for 14secs as the boat moves away.</li> <li>3. Returns to 65dBa or less ~5m past stationary recording device (and ~2-3m before)</li> <li>4. Note the truck noise on the road, 80m from recording device</li> </ol>
<p><b>A4 BRJB 1 pass @25m</b></p> <ol style="list-style-type: none"> <li>1. 28 seconds of &gt;65dBa noise as boat passed heading upstream</li> </ol>
<p><b>A6 Recreational Craft (Rob) @ 25m</b></p> <ol style="list-style-type: none"> <li>1. Only recorded at &lt;25m from boat (ie: no 100m comparison)</li> <li>2. Max recording of 80dBa</li> <li>3. &gt;65dBa for 16secs on upstream pass</li> <li>4. &gt;65dBa for 19secs on downstream pass</li> </ol>
<p><b>A8 Recreational Craft (Ronald) @ 25m</b></p> <ol style="list-style-type: none"> <li>1. Only recorded at &lt;25m from boat (ie: no 100m comparison)</li> <li>2. Max recording of 81.4dBa</li> <li>3. &gt;65dBa for 29secs on upstream pass</li> <li>4. &gt;65dBa for 18secs on downstream pass</li> </ol>
<p><b>A9 Ambient noise @ 25m</b></p> <ol style="list-style-type: none"> <li>1. Recording equipment left in same location and settings as for A3, A4, A6 and A8</li> </ol>
<p><b>A10 BRJB 1 pass @ 100m</b></p> <ol style="list-style-type: none"> <li>1. 6 seconds &gt;65dBa as backing away from shore and getting up onto the plane</li> <li>2. 5 seconds of non-boat (natural) &gt;65dBa noise (no obvious cause)</li> <li>3. 5 seconds of &gt;65dBa noise as a truck passed (max 72.6 at 5-10m from recorder)</li> <li>4. 1 second &gt;65dBa as boat passed heading downstream (65.1dBa)</li> <li>5. 4 seconds &gt;65dBa intermittent as boat passed heading upstream (66.1max)</li> <li>6. Nothing &gt;65dBa as boat returned to shore</li> <li>7. Maximum boat noise at 100m: 66.3</li> <li>8. Maximum ambient noise: 66.2</li> </ol>

## Noise Testing Results Graphs

