

30 OCT 2017

KJ Sutherland

Gravelling & Agricultural Contractor - 2475 Orawia – Clifden Highway, Orawia, RD 2, Otautau 9682

Phone: M. 0274 367 934 H. 03 225 5716 Email: kj.ar@velocitynet.co.nz

October 27, 2017

Environment Southland

Private Bag 90116

Invercargill 9840

Dear Consents Manager

Application for Land Use Consent – Proposed Gravel Extraction Activity – Waiau River at Clifden

Please find attached my application and information supporting a proposed gravel extraction activity located on a section of the Waiau River at Clifden

Should you require further information or clarification to any part of the application, please do not hesitate in me so that the process may be dealt with in the shortest possible timeframe.

My Consultant on this matter is River Pathways Consulting – Ken McGraw.

His contact details are: M. 0221 909 982 E. wild.trout@xtra.co.nz

Sincerely yours



Kevin J Sutherland





**environment
SOUTHLAND**

Cnr North Road and Price Street
(Private Bag 90116)
Invercargill

Telephone (03) 211 5115
Fax No. (03) 211 5252
Southland Freephone No. 0800 76 88 45

File No: _____
Officer in Charge: _____

To: KJ Sutherland
2475 Ohai Clifden Road
RD 2
Otautau 9682
Attention: Kevin Sutherland

WRITTEN APPROVAL OF A POTENTIALLY AFFECTED PARTY

Approval by Person(s) Potentially Affected by an Application for a Resource Consent

To be completed by the person requesting approval

Applicant: *KJ Sutherland - Agricultural Contracting*

Type of Resource Consent: *Land Use – Disturbance of the bed of a river – Gravel Extraction*

Proposed Activity: *Over a Seven year period extract up to 80,000 m3 of varying grades of gravel from the site providing commercial aggregate supply needs of local markets. Area A) Form dry pit and reshape surrounding area, Area A1) Skim/re-shape berm, Area B) Skim/reshape beach, install/remove as required 1200 mm. dia. pipe for temporary access across flowing water to the proposed work site.*

Location: *At one site on the left bank of the Waiau River at Clifden approximately 600 meters upstream of the Clifden Bridge. Location Co-ordinates: 1238289E – 48930656N as detailed on Location Plan Appendix 1*

To be completed by the person giving his or her approval:

Name: *Mr. F & S Hampton*

Street/Road Address: *806 Lillburn Valley Road, RD 1, Tuatapere 9682*

I/we have sighted all the attached plans and supporting information for the above activity.

I/we hereby give approval for the proposal to be considered by Environment Southland without public notification.

I/we understand that, if I give my approval, Environment Southland shall not take into account any effects that the proposed activity may have on me, when considering the application (Section 104(3)(b) of the Resource Management Act 1991).



(Signature)

26/10/17
(Date)

NOTE: IF YOU DO NOT UNDERSTAND WHAT THIS FORM IS, OR DETAILS ABOUT THE APPLICATION ASSOCIATED WITH THIS FORM, DO NOT SIGN IT.

Environment Southland is the brand name
of the Southland Regional Council

Guidelines for Potentially Affected Parties Request for Written Approval

Why is your written approval required?

If you have been asked to sign this form, it will be because someone is proposing an activity that requires a resource consent and you have been identified as a potentially affected party.

For a resource consent application to be processed as a non-notified, the applicant will need to:

- a. show that the proposed activity has no more than minor effects on the environment; and
- b. obtain the written approval of any person the Council considers may be potentially affected.

Because your written approval is being sought it does not mean you are affected. You may have been deemed a potentially affected party simply because you are a neighbour. The process is designed to give you an opportunity to consider the proposal and decide for yourself whether you are affected or not, and if so to what extent.

What should you do?




1. Study the application and plans (if any) of the proposed activity. These should help you understand any potential effects.
2. Decide whether the proposal will have any effect on you – and if so to what extent.
3. If you are happy with the proposal and wish to give your approval, you may do so by signing the written approval form, and copies of any associated plans.

If you are worried about giving your written approval you may wish to discuss the proposal with the applicant and/or Environment Southland. Discussing the proposal may assist with resolving any issues of concern. If you continue to be concerned with the proposal, you do not have to sign the form, however it is important that you let Environment Southland and the applicant know you will not be giving your approval and why. If after assessing your reasons for not signing, Environment Southland still considers you a potentially affected party, the application will be notified (publicly advertised and submissions sought).

Note: (1) By signing the written approval form you still retain the right to contact Environment Southland or lodge a complaint if you become concerned that the applicant is not complying with the requirements of their resource consent, or the proposal you gave written approval to.

- (2) This approval may be withdrawn in writing up to the time that the application is considered and determined.

For Further Assistance – contact Environment Southland's Consents Officers, via

 03 211 5115 or 0800 76 88 45
 (fax) 03 211 5252
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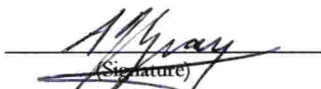
Name: *Mr. A Gray*

Street/Road Address: *1889 Ohai – Clifden Highway, Orawia, RD 2, Otautau 9682*

I/we have sighted all the attached plans and supporting information for the above activity.

I/we hereby give approval for the proposal to be considered by Environment Southland without public notification.

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To be completed by the person giving his or her approval:

Name: *Mr. P Fowle*

Street/Road Address: *Clifden, RD 2, Otautau 9682*

I/we have sighted all the attached plans and supporting information for the above activity.

I/we hereby give approval for the proposal to be considered by Environment Southland without public notification.

I/we understand that, if I give my approval, Environment Southland shall not take into account any effects that the proposed activity may have on me, when considering the application (Section 104(3)(b) of the Resource Management Act 1991).

P Fowle

(Signature)

26/10/17

(Date)

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03 211 5115 or 0800 76 88 45



(fax) 03 211 5252



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Gravel Extraction Evaluation Form



To be completed by a member of Environment Southland's catchment management division and submitted with any application for resource consent to extract gravel from the bed of a watercourse.

Name: K. J. Sutherland

Address: 2475 Ohai Elifden Road,
RD 2 Otautau 9682

for the extraction of 80,000 cubic metres of gravel from Waiau river/stream
at Elifden (location) 123 8289E - 489 30656N (Grid Reference)

over the next 7 year ~~month~~/period

The application is for a new consent/renewal of an existing consent (delete one)

Section 1

(If all of the boxes below are ticked, then affected party written approvals from Southland Fish & Game Council, Department of Conservation and Te Ao Marama Inc are probably not required)

- will not cross flowing water with heavy vehicles
- will not extract from flowing water
- will not extract below water level
- will not damage trees on the river bed or in the riparian area
- will not crush gravel on the site
- will not take or discharge water as part of the operation
- the site has been used for gravel extraction within the last 10 years.
- there are presently no black fronted tern, black billed gulls, dotterels, stilts or oyster catchers nesting and/or roosting in the vicinity of the proposed operation.
- the site is:
 - on the mainstem of the Aparima River downstream of the Jacobs Bridge, or;
 - on the mainstem of the Oreti River downstream of the Weydon Burn confluence and upstream of the Winton Bridge, or;
 - on the mainstem of the Mataura River upstream of the Ardlussa Bridge, or;
 - on the mainstem of the Mataura River and complies with the Council policy for extraction of small-scale gravel needs;
 - on the mainstem of the Waiau River. ✓

Section 2

(If all of the boxes below are ticked, then an Air Discharge Permit is probably not required)

- the rate of extraction will not exceed 100 tonnes per hour
- the rate of crushing will not exceed 100 tonnes per hour
- the rate of screening will not exceed 100 tonnes per hour
- the maximum size of stockpiles for material smaller than 5 mm in diameter will not exceed 5,000 m³
- the maximum size of stockpiles for material 5 mm in diameter and larger will not exceed 10,000 m³

Section 3

Is the river braided, meandering or incised?

Incised

How much gravel is currently available at the site and will it sustain the proposed extraction?

Current quantities well in excess of annual and total volume sought. Re-supply/mobilisation constant

Are there any signs of riverbank erosion that would be exacerbated by the proposed extraction?

No

Has the river changed course as a result of previous gravel extractions on this stretch of the river?

No

Are there any flood risks associated with the area and could the extraction create a greater flooding risk?

No

Are there any structures or flood protection works in/over/next to the water body the vicinity of the proposed works? If yes, will the works have any effect on these structures?

Yes. State highway bridge - approx 600 m downstream. The works will have no negative effect on these structures

The following consent conditions must be included on any consent resulting from this application:

- In the event of a discovery, or suspected discovery, of a site of cultural importance (Waahi Taonga/Tapu) during the construction, the consent holder shall immediately cease operations in that location and inform the local iwi authority (Te Ao Marama Inc, phone 03 931 1242). Operations may recommence at a time as agreed upon in writing with the Consent Authority. The discovery of Koiwi (human skeletal remains) or Taonga or artefact material (e.g. pounamu/greenstone) would indicate a site of cultural importance. Appendix A to this consent outlines the process that is to be followed in the event of such a discovery.
- There shall be no disturbance of the roosting and nesting areas of the black fronted tern, black billed gull, and banded and black fronted dotterel, or the feeding areas of the banded and black fronted dotterel, as a result of the exercise of this consent.

Declaration

The application has been assessed with regard to the Catchment Management division's responsibilities.

I recommend the application be approved/declined (delete one).

Recommended by: / /

I give my written approval as representative of the Catchment Management division's responsibilities to the application being granted

Noel Hinton
Catchment Manager / /

Application for Resource Consent (PART A)

This application is made under Section 88 of the Resource Management Act 1991



The purpose of this Part A form and the relevant Part B form(s) is to provide applications with guidance on information that is required under the Resource Management Act 1991. Please note that these forms are to act as a guide only, and Environment Southland reserves the right to request additional information.

To: Environment Southland
Private Bag 90116
Invercargill 9840

Full name, address and contact details of applicant (in whose name consent is to be issued)

Name: K. J. Sutherland
 Address: 2475 Ohai Elifden Road
RD 2 Otautau 9682
 Email: kj.ar@velocitynet.co.nz
 Phone: 0274 367934 Preferred 03 225 5716 Additional Fax: _____

Consultant contact details (if different from above)

Contact name/agent: River Pathways Consulting. Ken McGraw
 Address: 38 Lisa Meerings Road
RD 3, Cromwell 9383
 Email: wild.trout@xtra.co.nz
 Phone: 0221 909 982 Preferred 03 445 0516 Additional Fax: _____

Please tick the box for the consent(s) you are applying for and complete the relevant Part B form(s) where available:

Land Use	Discharge	Coastal
<input type="checkbox"/> Bore/well	<input type="checkbox"/> To air	<input type="checkbox"/> Whitebait stand
<input type="checkbox"/> New or expanded dairy farming	<input type="checkbox"/> To water	<input type="checkbox"/> Structures/occupation of space
<input type="checkbox"/> Effluent storage	<input type="checkbox"/> To land	<input type="checkbox"/> Removal of natural materials
<input type="checkbox"/> Cultivation	Water	<input type="checkbox"/> Disturb foreshore/seabed
<input type="checkbox"/> Tree planting	<input type="checkbox"/> Take and use surface water	<input type="checkbox"/> Discharge/deposit substances
<input checked="" type="checkbox"/> Gravel extraction	<input type="checkbox"/> Take and use groundwater	<input type="checkbox"/> Commercial surface water activity
<input type="checkbox"/> Hill country burning	<input type="checkbox"/> Dam water	<input type="checkbox"/> Reclaim/drain foreshore/seabed
<input type="checkbox"/> Riverbed activity (incl. streams/creeks and stopbanks)	<input type="checkbox"/> Divert water	<input type="checkbox"/> Marine farming
<input type="checkbox"/> Bridges and culverts		<input type="checkbox"/> Other coastal activities

- 1 Are there any **current** or **expired** consents relating to this proposal? Yes No

If yes, please provide consent number(s) and description:

Consent # 301651
Gravel Extraction, Waiau River, Clifden

- 2 Are any other consents required from Environment Southland or **other authorities**? Yes No

If yes, please state the relevant authority and the type of consent(s) required:

- 3 For what **purpose** is this consent(s) required: (e.g. discharge of effluent, gravel extraction etc.)

Gravel Extraction

- 4 **Location** of proposed activity

Address: Waiau River - left bank upstream of
Clifden Bridge

Legal Description: Crown Land - Hydro Linz

Map Reference (NZTM 2000): 123 8289 E 489 30656 N

- 5 The name and address of the **owner / occupier**: (if other than the applicant)

Name: The Crown - Linz Phone: 03 441 0790

Address: c/- Colliers International
P. O. Box 416, Queenstown 9348

- 6 Please attach a map or a coloured aerial photograph, showing at a minimum, the location of the proposed activities.

7 Assessment of effects on the environment (AEE)

Please complete the applicable Part B form(s) for the proposed activities. For those activities where no Part B form is available, please attach a written statement that assesses the effects that your activities may have on the environment. An assessment of effects **must** include the following information:

- (a) *If it likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:*
- (b) *An assessment of the actual or potential effect on the environment of the activity:*
- (c) *If the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment that are likely to arise from such use:*
- (d) *If the activity includes the discharge of any contaminant, a description of—*
 - (i) *the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
 - (ii) *any possible alternative methods of discharge, including discharge into any other receiving environment:*
- (e) *A description of the mitigation measures (safeguards and contingency plans where relevant) to be undertaken to help or prevent or reduce the actual or potential effect:*
- (f) *Identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any persons consulted:*
- (g) *If the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:*
- (h) *If the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).*

You should also include:

- (a) *An assessment of the activity against any relevant provisions of any relevant objectives, policies, or rules:*
- (b) *Any information specified to be included in the application in accordance with the relevant regional plan:*
- (c) *For an application to replace an existing consent, an assessment of the value of the investment of the existing consent holder:*

An assessment of effects **must** address the following matters:

- (a) *any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:*
- (b) *any physical effect on the locality, including any landscape and visual effects:*
- (c) *any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:*
- (d) *any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:*
- (e) *any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:*
- (f) *any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.*

8 Affected Parties

Please attach written approval from parties who may be affected by your activity. *Written Approval of an Affected Party* forms are available on the Environment Southland website. During the processing of your application, Council may determine that additional approvals are required.

Checklist: Have you included the following?

- Payment of the required deposit (*see attached fee schedule*)
- Written approval from all potentially affected parties (*forms available from the Environment Southland website*)
- Site plan/location map/sketch of the proposed activity
- A copy of the Certificate of Incorporation (*where applicant is a company*)
- Part B form(s) specific to your activity and/or a separate assessment of environmental effects (AEE)

Notes:

- (a) *If your application does not contain the necessary information and the appropriate fee, Environment Southland must return the application.*
- (b) *Council cannot accept electronic lodgement of applications at this time.*

Signature of applicant

I hereby certify that to the best of my knowledge and belief, the information given in this application is true and correct.

I undertake to pay all actual and reasonable application processing costs incurred by Environment Southland.

Name (block capitals) KEVIN JAMES SUTHERLAND
Signed *K. Sutherland* Date 12-8-17.
(Signature of applicant or person authorised to sign on behalf of applicant)

Fee Schedule

The Council's user charges are fixed under Section 36 of the Resource Management Act 1991. Refunds may be given, or additional fees are charged, where appropriate.

Deposits	
Bores and wells Whitebait stands Transfer of a consent from one person to another Administrative variation	\$100
Certificate of Compliance	\$500
Transfer an activity from one site to another Any other change/variation to an existing consent	\$1,350
All other non-notified applications	\$1,350
Concurrent non-notified consent applications	\$150
Applications that require notification or limited notification	\$2,000

Note: The fees shown in Table 1 are deposits to be paid at the time of application. Due to the complexity of these activities, this deposit will not usually cover the full cost of processing the application. Further costs may be incurred relating to staff time, disbursements, legal charges, consultation fees, and hearing commissioner fees.

Concurrent – means for additional permits in respect of the same site, activity, applicant, time of application, and closely related effect as the first application.

Environment Southland accepts payment in the forms of cash, Eftpos, cheque, or electronic transfer. All electronic transfers must include the applicant's name and "consent application" as a reference. Please make electronic payments to: Environment Southland, 01-0961-0018998-00.

User Charges: Please note that additional annual Users Charges will apply to all consents. These are payable in advance on the first day of July each year. Schedules 3 and 4 of the Environment Southland User Charges and Fees document outline the fees associated with Annual Administration Charges and Annual Consent Monitoring and Inspection Charges. Schedule 6 Annual Research and Monitoring Charges apply only to surface and groundwater takes and comprise the following:

- **Surface water takes:** A charge of **\$1.72** per year per cubic metre authorised as a maximum daily take. Minimum of **\$138**, maximum of **\$6,895**, per consent.
- **Groundwater takes:** A charge of **\$0.81** per year per cubic metre authorised as a maximum daily take. Minimum of **\$162**, maximum of **\$1,620**, per consent

Municipal and stock water charges are reduced by 50%.

Environment Southland's User Charges and Fees document is available at: www.es.govt.nz/resource-consent/fees

Application for Gravel Extraction (PART B)

This application is made under Section 88 of the Resource Management Act 1991



A complete Part A form needs to be provided with this Part B form. The purpose of this Part B form is to provide applicants with guidance on information that is required under the Resource Management Act 1991. These forms are to act as a guide only and Environment Southland reserves the right to request additional information. Please also refer to Appendix A of the Regional Water Plan for Southland, 2010.

To: Environment Southland
Private Bag 90116
Invercargill 9840

NOTE: A completed Gravel Extraction Evaluation Form must be submitted with this form. This form can be found on our website www.es.govt.nz

1 What is this application for?

a new gravel extraction consent the renewal of existing consent ref no: _____

2 What duration of resource consent is sought? Seven years

3 Which river(s) do you propose to take gravel from?

Waiau River

4 For what purpose(s) will the gravel be extracted?

Road maintenance, Farm supplies, Concrete, Landscaping

5 Details of the contractor (or any other person) who will undertake the proposed extraction work.

Contracting company name: K. J. Sutherland

Contact person: Kevin Sutherland

Phone number: 0274 367 934

6 GPS co-ordinates of the site(s) you propose to extract gravel from

Site 1: NZTM 2000 123 8289 E 489.30656 N (sites central location)

Site 2: NZTM 2000 _____ E _____ N

7 Please provide the following details for the extraction site(s)

Site 1: Length: 461 m Width: 398 m
Site A Area: 84,782 m² Depth: 4 m

Site 2: Length: 470 m Width: 40 m
Site A1 and B Area: 14,562 m² Depth: 2 m

8 What is the maximum volume of gravel that you propose to extract each year?

Site 1: 5700 m³ per year Site 2: 5700 m³ per year
Site A Site A1-B

9 What is the total volume of gravel that you propose to extract?

Site 1: 5700 m³ per year Site 2: 5700 m³ per year
Site A Site A1-B see section 10 of attached report.

10 Please describe the proposed method for extraction.

- Will the work involve beach skimming or pond/pit methods of excavation?
- Will the work require access through flowing water?
- Will gravel be extracted only from the dry bed of the river?
- What buffer distances will be maintained between the extraction points and flowing water?

- Site A - Pit Method
- Site A1-B - Beach Skimming
- No access required through flowing water
- See section 13 of attached report.
- 20 metre buffer distance

- 11 Will there be any additional processing of gravel on-site e.g. washing, crushing? Are there likely to be any associated discharges of contaminants to land, water or air?
If *yes*, please give details and explain how any discharges will be minimised.

Screening and crushing will occur.
See section 15 of attached report.

Note: the washing of gravel refers to the removal of any excess sediment from the gravel. Further consents to discharge contaminants (silt & sediment) to water may be required (please refer to the relevant Part B form).

Note: the crushing of gravel at the extraction site may result in the discharge of dust to air. Further consents to discharge contaminants to air may be required (please refer to the relevant Part B form).

- 12 Is the stock piling of gravel proposed at any time?

If *yes*, please give details including where the gravel will be stockpiled, the size of stockpiles, and the intended duration of any stockpiles.

Yes.
See section 15 of attached report

Existing Environment

13 Are any of the following features found within the existing environment of the proposed activity? Describe these features in the space below, along with details of the assessment undertaken to determine the presence of these features.

- (a) Signs of instream life (e.g. fish, eels, bullies, crayfish, native birds, frogs)?
- (b) Areas where food is gathered from a water body (e.g. watercress, eels, wildfowl)?
- (c) Wetlands, wildlife habitats or bird nesting habitats (e.g. swamp areas)?
- (d) Areas of particular aesthetic, cultural, heritage or scientific value (e.g. archaeological sites)?
- (e) Waste discharges, water takes and/or monitoring sites?
- (f) Any other gravel extractions?
- (g) Other activities occurring in the area (e.g. commercial activity, fishing, swimming, boating)?

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

See section 21 of the attached report.

Please also include relevant photographs of the proposed extraction sites, looking both upstream and downstream of the extraction sites.

Please also include a map and/or site plan showing the above mentioned features and the following:

- roads, property boundaries and neighbouring properties, along with the names of adjacent landowners;
- buildings;
- rivers, streams creeks, drains or any other water bodies;
- structures, stop banks and other flood protection works

Assessment of Effects

14 Will the extraction of gravel alter river flows during flood or low flow events?

No

15 Will the extraction of gravel cause significant riverbed erosion, either at the site or downstream? If yes, please provide a discussion of the potential risks.

No

16 Are there any structures or flood protection works in the vicinity of the proposed works? If yes, will the works have any effect on these structures? Please provide specific details.

State Highway Bridge
No negative effect

17 Pursuant to Schedule 4 of the Resource Management Act, 1991, there are a number of matters that must be addressed by an assessment of environmental effects. Please discuss what effects the proposed activity will have on the following:

- (a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects

Refer to section 19, 21, - 22 of attached report

- (b) any physical effect on the locality, including any landscape and visual effects

Refer to section 21 (20.3 - 20.7) of the attached report

- (c) any effect on plants or animals and any physical disturbance of habitats in the vicinity

No

- (d) any effect on natural and physical resources having visual, recreational, historical, or cultural value

No

(e) any discharge of contaminants into the environment

No

(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards

No

18 Please include a description of the monitoring or mitigation measures to be undertaken to help avoid, reduce or remedy effects on the environment.

Refer to sections 21 - 22 of attached report

19 Please describe how you will minimise the release of silt, sediment and other contaminants into water.

Construction of buffer strips as required/
necessary

Refer to Section 13 of the report.

- 20 Please include evidence of any consultation undertaken for this application. This may include (but not be limited to) consultation with adjoining landowners, other consent holders in the immediate area, iwi (e.g. Te Rūnanga O Ngāi Tahu, Te Ao Marama Inc.), government departments/ministries (e.g. DOC), territorial authorities and recreational associations.

Please note that in accordance with Schedule 4 of the RMA, you may also be required to provide an assessment of whether or not the proposed activity is contrary to any of the relevant provisions of the following documents.

- (a) Regional Policy Statement for Southland, 1997*
- (b) Proposed Southland Regional Policy Statement, 2012 (and any proposed/ subsequent versions)*
- (c) Regional Water Plan for Southland, 2010*
- (d) Proposed Southland Water and Land Plan, 2016 (and any proposed/ subsequent versions)*
- (e) National Policy Statement for Freshwater Management, 2014*
- (f) National Environmental Standard for Sources of Human Drinking Water, 2007*

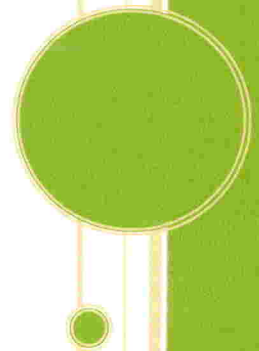
Staff are able to advise whether this is required, as it is dependant on the location, scale and complexity of your proposal. We invite you to come in for a pre-application meeting with Environment Southland consents staff to discuss this.

END OF FORM

REPORT – WAIAU RIVER
CLIFDEN, SOUTHLAND
PROPOSED GRAVEL
EXTRACTION

*Application for Land Use Consent – KJ
Sutherland*

Authored by: Ken McGraw – River Pathways Consulting
October 2017



REPORT – WAIIAU RIVER CLIFDEN, SOUTHLAND PROPOSED GRAVEL EXTRACTION

Application for Land Use Consent – KJ Sutherland

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1. Preamble

This report provides detailed information supporting an application for resource consent by KJ Sutherland of Orawia (the applicant) to undertake a suite of works for the purpose of river-run gravel for supply to local commercial markets.

A current consent for gravel extraction and processing at this site is held by Mr. Sutherland.

The details of that consent are discussed in Section 7.

The proposed activity discussed in this report involves excavation and processing of various grades of aggregate from three areas within a defined site located on the true left bank of the Waiau River some 700 meters upstream of the Orawia – Tuatapere State Highway 99 Bridge.

Included are matters that must be considered by Environment Southland when deciding whether or not to grant consent for a proposed activity over the bed of the section of Waiau River discussed in this report.

Data provided in this report is the result of site knowledge, a study of landscape reports aerial photography and Environment Southland (ES) catchment flow data.

The positioning and dimensions of the proposed activity have been developed using that data along with an on-site survey/inspection with ES Catchment Management Division - River Engineer Paul Pollard.

The limits of potential gravel available from the proposed location using the three areas have been calculated using site measurements, visual assessments and gravel studies, reports and recommendations developed by ES.

The relevance of sustainability values associated with the proposed activity discussed in this report are generally in accordance with the findings, objectives and recommendations contained in the following report:

- Southland Regional Council Publication No. 2007-01-An Overview of Gravel Extraction Activities in Southland, Compiled by Steven Leddington - Water Resources Scientist.

That document provides a broad overview of past and present gravel extraction activities in Southland including a brief description of gravel extraction methods and processes of eight regions around New Zealand.

The effects of instream mining (including beach skimming) are considered, as are the impacts of floodplain mining (habitat ponds). Although 10 years old, the information, objectives and recommendations contained in this document remain relevant to many present day river-run gravel extraction activities.

Of particular relevance, ES Publication No. 2007-01 notes the value of the extraction and use of river sourced aggregates being instrumental in the social and economic well-being and growth of the Southland Region. The on-going development and maintenance of the regional road network, construction industry, farming needs and other infrastructure needs are drivers behind the continued need for river based aggregate extraction and processing.

River based extraction not only requires a clear understanding of resource availability but also the relationship between supply and exploitation, and the consequential impacts that the latter may have under the current re-supply regime. These matters are further discussed in Section 21 - Assessment of Effects.

Some of those impacts may include the degradation of river form, bed destabilization, impacts on aquatic habitats and riverine dwelling birds, particularly the endangered Black-billed Gull, Banded Dotterel, Black-fronted Tern and South Island Oyster Catchers. The balance of effects and extent of these impacts on these nationally important riverine dwelling birds depends on an array of factors, including complete destruction of quality habitat values, disturbance during nesting and molt periods, loss of food sources and exposure to increased predation.

Although river systems are not the only source of aggregates in Southland, historically they have become the preferred source of raw material over out of river deposits because of the perceived limitless availability, ease of extraction, proximity to end use markets and aggregate quality (strength, grading, and durability) and relatively clean composition.

Out of river extraction is generally favored by agencies such as Fish and Game Southland for reason it avoids interference with the active river bed and can provide opportunities for enduring riparian habitat for both fish (refuges where river reaches are ephemeral) and game birds.

It should be noted that past and present commercial gravel extractions from the Waiau River have been/are relatively small with the majority of extractions occurring through the Clifden to Tuatapere reach. Other relatively short term extractions have occurred on tributary systems with the main sites being the Wairaki and Orauea Rivers.

The Southland Catchment Board (SCB) and more recently ES have managed the approval process that gives contractors access to these river based gravel sources. CMD have also successfully used these activities as a river management tool to assist in maintaining river system flood carrying capacity and to assist in mitigating river bank erosion.

If gravel extraction operations were to relocate to land based pit operations outside the river systems per se then this river management component would be lost unless ES undertakes such work when required and when sufficient funds are available. If that were to happen then the burden of increased river management costs would fall back on the community in one way or another.

A final recommendation of the ES Publication 2007-01 confirms management skimming of aggradational bars should continue. These activities are considered an important tool to maintaining floodway capacity and minimize the risk of floodbank overtopping. However the report also confirms that river sourced gravel removal quantities needs to be limited ensuring re-supply and accumulation rates are sufficient to avoid negative impacts on channel morphology and wildlife habitats.

Within the context that the proposed activity discussed in this report sits within a reach that demonstrates continuous re-supply and aggradational behavior, it is considered the proposed activity is compliant with those objectives and recommendations.

2. Purpose

The purpose of the proposed activity is to:

- Provide KJ Sutherland with a commercial quantity of locally sourced gravel over a 7 year period.
- Provide a range of quality aggregate products to meet the needs of the Western Southland rural community and wider regional needs;
- Provide elements of floodway capacity maintenance at no cost to river scheme ratepayers;
- Provide elements of good habitat values for a range of riverine birds;
- Provide elements of continuous all weather vehicle/foot access to the Waiiau River immediately upstream of the Clifden Historic Suspension Bridge.

3. Objectives

Undertake a bed load excavation and removal activity in a way that complies with established/agreed conditions of consent and ensuring positive objectives embodied by the purpose of the activity are delivered.

4. Deliverables

The proposed activity will provide a number of benefits through delivery of the following;

- 1) Provide a reliable yield of quality river based aggregates needed to satisfy demands of the local Western Southland construction industry, and continuing social, cultural and economic well-being of the community/region;
- 2) Provide a positive river management outcome associated with maintenance of an unobstructed floodway;
- 3) Provide increased safe habitat values for riverine dwelling/nesting birds, particularly the endangered Black-billed Gull, Banded Dotterel, Black Fronted Tern and South Island Oyster Catchers.

- 4) Maintain natural river processes through the reach via a professionally managed gravel extraction process over a ten year period.

5. Proposed Activity Management Statement

All components of the proposed activity discussed in this report will be managed and delivered exclusively by KJ Sutherland.

Mr. Sutherland is a local resident and contractor who has provided aggregate supplies meeting the needs of the Western Southland district over many years.

Additionally, Mr. Sutherland is a person who demonstrates a sound understanding regarding the finite and fragile nature of sustaining valuable-river based gravel supplies required for his business continuance. Mr. Sutherland also possess a strong belief in the value of strong partnerships in terms of community and organizational focused beneficial outcomes from gravel extractive activities and its effects on water quality and environmental matters through working genuinely with key partners such as Environment Southland, Fish and Game Southland, Department of Conservation, Te Ao Marama representing Iwi and Land Information New Zealand.

6. Site Location and Description

The proposed gravel extraction site is located on the true left bank of the Waiau River some 700 meters upstream of the Tuatapere to Manapouri State Highway 99 Bridge.

Site data is as follows:

- Location Plan: Refer to Appendix 1
- Map Reference: 123 8289E – 489 30656N (central point of Area A)
- Average boundary dimensions of the of the proposed activity site:
 - Depth – 398 m
 - Length - 461 m
- Total Area: 10.6 ha.
 - Area A – 84,782 m²
 - Area A1 – 14,562 m²
 - Area B – 6,673 m²

The proposed activity site is positioned along the edge of a major meander flowing against a high rock formation along the true right bank. Overall the river reach consisting upstream and downstream of the proposed activity site is of a single thread form migrating within a floodway demonstrating significant variations in width.

Through the reach immediately upstream of the proposed activity site the channel is split into two, channels of generally equal flows. At that point the active floodway extends over a width of 560 meters.

By comparison the reach immediately downstream of the proposed activity site is held incised by rock formations to a width of 142 meters.

These upstream and downstream features determines the incidence of the high rate of aggradational behavior present at the location of the proposed activity.

Generally the maximum elevation above normal water level of the proposed activity site is in the order of 2.2 – 2.8 meters.

Area B (refer to Appendix 2) is periodically isolated from the true left bank triggered when a river level of + 500 mm above normal is reached.

7. Existing Land Use Consent

KJ Sutherland holds a current Land Use Consent to extract gravel from the section of the Waiau Riverbed located within parts of the area discussed in this new application for consent.

A renewal of the existing consent is not sought for reason significant changes to the position of the river and formation of floodway beaches and island at the site.

Those changes offer a more sustainable supply of a range of aggregate grades than available within the current consent boundaries.

Detail of current Land Use Consent:

- Holder – KJ Sutherland
- Consent No.: 301651
- Term: 5 years
- Volume: Maximum of 50,000 m³
- Expiry Date: 14 January 2018
- Total volume of gravel removed as at September 2017: 32,400 m³

8. New Resource Consent Sought from Environment Southland

➤ Applicable Act – Resource Management Act 1991

- Section 13 (restrictions on certain uses of beds of lakes and rivers).
- Section 15 (discharge of contaminates into the environment).

- Resource consent sought – Land Use Consent – River bed activity including;
 - Disturbance of the bed of a river – remove bed load gravel
 - Relevant Plan – Regional Water Plan for Southland
 - Relevant Rule – Rule 41 and 48 (standard conditions)
 - Activity Status – Discretionary Activity
 - Dry screening and crushing;
 - Relevant Plan – Regional Air Plan for Southland
 - Relevant Rule – Rule 5.5.3 (10)
 - Activity Status – Permitted Activity (operating at less than 100 tonnes in any hour)
 - Install and remove single span bridge;
 - Relevant Plan – Regional Water Plan for Southland
 - Relevant Rule – Rule 26 (Standard Conditions)
 - Activity Status – Permitted Activity
- The proposed activities to which this application for Land Use Consent
 - Establish and maintain site access;
 - Set out permitted work site outer boundaries and excavation depths;
 - Install / remove as required temporary bridge providing dry access to Area B (see Appendix 2 – Site Plan);
 - Excavation and removal of aggraded bed load;
 - Dry screening and crushing material as required;
 - Temporary storage of processed material out of riverbed floodway;
 - Maintain access to the river for recreation activities;
 - Secure active work site in compliance with the requirements of the Health and Safety at Work Act 2015 (and amendments);
 - Completion / compliance with all conditions of consent throughout duration and completion of activity.

9. Term of Land Use Consent Sought

The term of consent sought: 7 Years

The rationale for a 7 year timeframe is that it provides KJ Sutherland with a degree of certainty to operate the proposed site in a progressive manner while having regard to delivery of community aggregate needs within a variable commercial demand environment.

The time frame also matches sustainability of the volume sought in terms of continuous bed load re-supply and aggradational behavior throughout the Blackmount / Clifden river reach and extending to the severely over supplied coastal reach downstream of the Tuatapere Township Bridge.

10. Volume of Gravel Sought

The total maximum volume of gravel sought: **80,000 m³**

Anticipated annual quantities from the proposed site based on historic records held by Mr. Sutherland and having consideration of use fluctuations are in the order of 7,000 – 10,000 m³.

The various grades of aggregate again depend on fluctuating district construction, farming and, road network maintenance needs.

Due to the significant changes to the river position of the main river flow and aggradation of gravel from continuing lateral erosion through the river reach immediately upstream of the proposed site, a better mix of grades associated with finer aggregate needs for concrete work is now available in greater sustainable volumes from Area A1 and Area B than previously available.

Generally the various grades of raw material from each area (annually) are:

- Area A – Larger stone size (50mm +) suitable for base material and crushing;
- Area A1 – Smaller stone size (5mm– 10mm) and fine sand/aggregate for concrete mixtures;
- Area B – Smaller stone size (10mm – 35mm) and fine sand /aggregate for farm roads and stock lane mixtures.

Annual volumes of the various grades from each of the three areas again depends of district needs that continually fluctuate due to a number of factors impacting rural communities.

However, based on historic records it is anticipated that a maximum of 11,400 m³ annually will be extracted with estimated volumes from each of the Areas as follows:

- Area A 5,700 m³ (50%)
- Area A1 3,420 m³ (30%)
- Area B 2,280 m³ (20%)

11. Legal Status Of The Land Within The Activity Area

Land tenure at the proposed work site is Crown Land - Hydro managed by Land Information New Zealand.

Refer to: Appendix 3 – Legal Descriptions - Waiau River, Clifden

12. Status of the Proposed Activity

The proposed activity discussed in this report is not new. Persons and organizations who have been approached by commercial and casual contractors seeking gravel from river based sources and having consulted ES CMD river managers about gravel extraction activities and

how they may be linked to beneficial outcomes for river management and providing enduring environmental outcomes will be familiar with them.

The type of activity discussed in this report and requiring authorization are based on the provisions of the Resource Management Act 1991 (the Act) specifically:

Section 13 – Restrictions on certain uses of beds of lakes and rivers.

Within that context the various activities for which consent is sought include the following:

- The excavation and disturbance of the river bed for the purpose of:
 - Removing gravel
 - Placement / removal of a temporary site access bridge
 - Screening and crushing of gravel.

13. How the Proposed Activity Will Be Carried Out

The proposed activity will be based on the construction of a shallow floodway pond on a part of Area A and the skimming of the beach areas of Areas A1 and B.

Refer to Appendix 2 for the position of each activity site.

All work will be carried out using an Elevator Scraper for beach skimming and a Hydraulic excavator loading trucks as part of the pit excavation activity. Following excavation the gravel will be transported to the central processing site, or immediate delivery to markets.

Positioning of the shallow floodway pond will be such to prevent any diversion of the main channel flow thereby effectively shortening the overall river length at this point.

Gravel will be extracted from Areas A1 and B by a skimming process. That activity will commence at 300 mm above normal water level and extracting on a shallow gradient away from the water's edge.

Additional conditions regarding potential negative effects and mitigation associated with the possible nesting of Black-billed Gulls on part of Area B are:

- Any modifications or lowering of the high point of Area B previously used by Black-billed Gulls for nesting will not occur;
- Should Black-billed Gulls be observed establishing nesting on any part of Area B any extraction work in progress will cease to avoid disturbance through the nesting fledging period.

All areas will be operated in a manner that ensures the proposed activity sites are tidy, with natural contours of the site maintained.

Any material temporarily stockpiled will be positioned out of the active floodway.

14. Days/Hours of Work

Extraction and processing and cartage of gravel from the proposed activity site will be:

- Monday to Friday – 7.00 am to 6.00 pm
- Saturday – 7.00 am to 5.00 pm
- Sunday – Nil

Ensuring mitigation of potential negative effects to the public enjoyment of the river system, work will not occur on the following days:

- Days of National significance
- Through the official Christmas holiday period.

The above Days/Hours of work are compliant with the Southland District Plan - Section 2.11 – Noise, Rural Zone – Section 3.1.

15. Machinery, Processing and Temporary Stockpiling

Machinery to be utilized in undertaking the proposed activity

- Hydraulic excavator
- Elevator Scraper
- Trucks
- Wheeled loader
- Mobile screening / crushing plant

All gravel will be extracted using a hydraulic excavator. Once excavated the gravel will be dealt with in the following ways:

- River-run material will be loaded directly into truck units as unprocessed material for delivery to markets;
- River-run gravel loaded to trucks and carted to the on-site mobile screening plant for processing and delivery to markets;

Note: The screening operation is a dry screening process therefore, no water take or discharge consent is sought for this activity.

- A range of screened larger stone size material to be crushed to provide a range of chip material for delivery to markets.
- Stockpiling – The following rational and duration for stockpiling is as follows:

- To mitigate the potential spread of Diddymo to other water bodies raw gravel to be stockpiled for a minimum of four weeks prior to delivery to off-site markets;
- Various grades of processed gravel stored on high ground prior to market delivery.

Note: Discharge of Contaminates to Air – Regarding a potential discharge to air of dust from the screening and crushing activity, all processing will be within the following *Permitted Activity* status:

Regional Air Quality Plan for Southland.

Rule 5.5.3 (10) any gravel extraction process operating at 100 tonnes or less in any hour.

Dust – During dry climatic periods dust is likely to be generated by operational machinery (trucks/screening plant working on the proposed activity site).

Ensuring compliance with Rule 5.5.3 (10) suppression of dust (if required) will occur using sprayed water (sprinkler hose and or water truck) abstracted from an on-site storage pond as a permitted activity under Rule 18 (a), (i), (ii), (iii) of the Regional Water Plan for Southland.

16. Waiau River – Catchment Data and Environmental Setting

The Waiau River catchment lies on the eastern edge of Fiordland and is Southlands largest catchment at 8,173 square kilometres.

It is the outflow of Lake Te Anau flowing from it into Lake Manapouri 10 kilometres to the south, and from there flows south for 70 kilometres before reaching Foveaux Strait 8 kilometres south of Tuatapere. It also receives water from Lake Monowai.

Major tributaries of the Waiau River above the Mararoa Weir, include the Mavora Lakes and Mararoa River, Eglington, Upukerora and Whitestone Rivers and Lakes Te Anau and Manapouri. Below the weir, major tributaries include the Borland Burn, Lake Monowai, and Monowai River, Dean, Lill and Alton Burns, and the Wairaki, and Orauea Rivers.

The Waiau River has been developed for hydro-electric power generation, with the Manapouri Hydro-Electric Power Scheme operating on the western arm of Lake Manapouri, resulting in the diversion of up to 90% of the flow in the catchment.

The environmental setting of the Waiau River as discussed in Section 16 can only be described as stunning with the river winding its way through a mixture of highly modified farmland and lush beach forests the environment full of spectacular natural diversity continues to deliver a feeling of an untouched wilderness so great that the section of the Upper Waiau River between Lake Manapouri and Te Anau doubled as the fictional River Anduin in the Lord of the Rings film trilogy such is the strength of the natural spectacular landscape of the area.

17. Waiau River – Catchment Area and Hydrological Data

Note: Hydrological data detailed in this report has been provided through a study of Environment Southland Waiau Catchment water level recorders.

- Catchment Area - 8,173 km²
- Normal water level – 2.3 m at Sunnyside
- Flood Level highest recorded at Sunnyside = 5.07 m above normal
- Highest recorded flow – 2,021 m³sec. 27.1.1984
- Peak flow last 7 days as at 22.10.2017 – 61.67 m³sec.
- Average summer low flows – 18 m³sec.

Note: Sunnyside hydrological measurement site is positioned 28 km upstream of the proposed activity site at Clifden.

18. Climate

The climate of Western Southland is variable. In general Southland has a cool temperate climate. Typical daytime temperatures in the summer range from 16 deg.C to 23 deg.C and in winter from 8 deg.C to 12 deg.C. On average Southland annual rainfall is 1,000 mm.

The proposed gravel extraction site at Clifden is located some 11.5 km from the coastal

Climatic conditions throughout the Waiau Catchment varies from the coastal environment at Tuatapere township having mean daily temperature variations from 5.2 deg.C in July to 14.9 deg. C in January. Rainfall varies from 900 mm to 1300 mm annually.

By contrast the mid to upper section of the Western Southland district adjacent to Fiordland National Park and extending to Lakes Manapouri and Te Anau has a wet mountain climate. In this area rainfall is the highest in New Zealand and varies between 6,500 mm to 7,000 mm annually.

Considering the upper limits of the Waiau catchment receive the highest rainfall values sudden impacts on river rises are controlled by the Upper Waiau and Mararoa River control structures as part of hydroelectric generation through the Manapouri power station.

Although that control is designed to control the level of Lakes Te Anau and Manapouri through manipulation of flows down the Waiau River, significant river level and flow

fluctuations through the river reaches downstream of the hydroelectric control structures do occur.

Generally these events occur following high rainfall events throughout the major Waiau sub-catchments, particularly the Wairaki, Orauea and Lillburn Rivers.

Impact of river flow rises on the proposed operation will generally be limited to Area A1 and Area B. The plant storage and processing location sits on higher ground within Area A. Should this area come under threat of inundation, all plant fuel and other equipment will be moved off-site.

19. Consideration of Alternatives

Although the potential adverse effects of the proposed activity are considered to be less than minor, alternatives have been considered in accordance with the Fourth Schedule of the RMA.

Due to the nature of the activity and identified local community and wider district benefits in providing a needed resource in addition to protection of habitat values for Black-billed Gulls, floodway benefits and all weather vehicle access to a reach of the Waiau River for recreation.

Investigations for other sites delivering similar benefits in close proximity to the proposed site were negative.

The only alternative to the activity proposed at this location would be to adopt a “do nothing” approach.

That approach would result in the following negatives:

- Loss of a viable commercial opportunity to provide a sustainable strategically positioned gravel resource meeting community needs without risk of environmental negatives;
- Loss of potential benefits assisting in providing protection of the historic nesting site for the endangered Black-billed Gull;
- Loss of valuable formed all weather public access to river beach for recreation on a river system that has limited public access.

20. Statutory Considerations

20.1 Resource Management Act 1991

In reaching a decision on a resource consent application, Council has to be satisfied by granting the application, Part 2 – Purpose and Principals of the RMA will be achieved.

That purpose is to promote the sustainable management, use development, and protection of natural and physical resources in a way or rate, which enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety.

The purpose and rational underpinning the proposed activity discussed in this report are considered to be consistent with the purpose of the RMA as defined by Part 2.

20.2 Regional Policy Statement

The Regional Policy Statement for Southland (RPS) provides an overview of the resource management issues for the region. It sets out how natural and physical resources are to be managed in an integrated way to promote sustainable management.

The proposed activity discussed in this report are considered to be consistent with RPS policies (particularly 5.6 Lakes, Rivers and Wetlands and 5.15 Natural Hazards in the RPS and the Proposed Regional Policy Statement for Southland (PRPS)).

Conclusion - In particular, the proposed works are consistent with respect to maintaining river form and stability, and erosion mitigation. The provision of an important community resource (gravel) as discussed in this report is consistent with the sustainable management of a natural resource.

20.3 Regional Water Plan for Southland

The Regional Water Plan for Southland (Water Plan) provides the statutory framework for the management of Southlands water resources. The following objective and policy are of particular significance to the proposed activity discussed in this report.

Objective 10 – Habitats and ecosystems.

To maintain or embrace the diversity and integrity of aquatic riverine habitats and ecosystems.

Policy 32 – Manage structures and bed disturbance activities in the beds of rivers and lakes to avoid, remedy or mitigate adverse effects on:

- a) Water quality and quantity;*
- b) Habitats, ecosystems and fish passage where that is expected to naturally occur;*
- c) Indigenous biological diversity;*
- d) Heritage, cultural and spiritual values;*
- e) Public access (except in circumstances where public health and safety are at risk) and amenity values;*
- f) Natural character and outstanding natural features;*
- g) River morphology and dynamics, including erosion and sedimentation;*
- h) Flood risk;*
- i) Infrastructure assets;*
- j) Navigational safety.*

Rule 1 of the Water Plan addresses discharges to surface water bodies where the discharge meets specific water quality standards.

It is certain that the water quality requirements throughout the undertaking of the proposed activities will be met due to the short timeframe associated in the placement and removal of the temporary site access bridge across a minor dry/wet braid through the center of the proposed activity site.

The gravel extraction activity will occur away from and out of flowing water at all times throughout the extraction and rehabilitation process thereby avoiding damage to or disruption to aquatic animals and ecosystems.

Any sediment issues created during the extraction process will be contained at all times via construction of a bund as necessary to fully contain any potential sediment outflow from the proposed activity.

The proposed activity will be staged and managed to adjust to and manage the possible impacts of a high flow event overrunning the proposed activity as it progresses and to avoidance of disturbance of riverine nesting birds, particularly the nesting and fledging of Black-billed Gulls.

For these reasons the proposed activity is consistent with Objective 10 – Habitats and Ecosystems.

Conclusion - The proposed activity is also considered to be consistent with Policy 32 (g.) (river morphology and dynamics) as it will clearly assist in maintaining a stable river form.

20.4 Regional Air Quality Plan for Southland

Section 5.5.3 – Any discharges of contaminants into the air from the following industrial or trade premises are permitted activities, provided that the criteria which follow the list (1) – (12) are met:

Rule 5.5.3 (10) Any gravel extraction process operating at 100 tonnes or less in any hour.

Conclusion - The proposed activity discussed in this report will be managed in a way that ensures compliance with Rule 5.5.2 (10).

20.5 Te Tangi Au Tairua – The Cry of the People – Ngai Tahu ki Natural Resource and Environmental Iwi Management Plan

The relevant section of the Iwi Management Plan with regard to this proposed activity is 3.5.15 Activities in the Beds and Margins of Rivers – Issues. Bullet point 6 – Stream bed degradation and bank erosion is relevant.

To Maori water is considered as taonga (treasure) because it is life sustaining and central to Maori wellbeing and forms an important part of Mahinga kai – Te Runanga o Ngai Tahu in terms of customary freshwater fisheries management.

Ngai Tahu interests in traditional food and other natural resources and the places where those resources are gathered are particularly relevant to the proposed activity discussed in this report.

Loss of Mahinga Kai includes access, disruption of fish movement and migration.

Ngai Tahu Murihiku policies on gravel extraction and other activities in the beds of rivers and margins of rivers focus on balancing the protection of river environments, and the cultural values associated with such environments, while recognizing the need to ensure supply of gravels and aggregates, and to undertake flood works.

Conclusion - It is considered the proposed activity discussed in this report is in accordance with the Ngai Tahu Murihiku policies and values associated with the Mahinga Kai.

20.6 Southland District Plan

Part 3.1 Manawhenua – The RMA imposes statutory duties on District Councils to recognize the principals of the Treaty of Waitangi, and it also imposes duties in respect to other Maori issues.

Objective MAO.1 Kaikiakitanga – *To have particular regard to the concept of kaitiāanga in relation to managing the use, development and protection of natural and physical resources.*

Objective MAO.5 Wai (water) – *To recognize the significance of water to Kai Tahu traditions and culture and to provide for such traditions and culture.*

Note: The above objectives are relevant to the proposed activity discussed in this report therefore, full discussion regarding the activity and mitigation measures proposed with Te Ao Marama Inc. will occur as part of the consultation process.

Part 3.8 Natural Hazards and 3.13 Public Works and Network Utilities of the Southland District Plan (SDP) contains the objectives and policies relevant to this proposed activity.

Objective NHZ.1 – Non Structural Approach – To reduce the adverse effects from any actual or potential natural hazard by providing a non-structural strategy to avoid and/or mitigate these effects.

Explanation – The principal reason for adopting a non-structural approach to natural hazard mitigation is because the level of structural defenses is now reasonably well developed, particularly in regard to flooding. The protection provided however, is far from absolute and certainly on its own, be considered to constitute sustainable management of the rural flood plains of Southland. To place undue reliance on structural protection (flood banks) as a standalone flood management tool could leave a community very vulnerable to a flood event. Therefore, further measures are needed to compliment the migratory works that are in place. By identifying and planning for potential natural hazards, the economic and social impacts of such events should not be as devastating or costly as in the past and therefore regional development will be more sustainable.

Part 3.13.2 – The Issues – The development and continued maintenance of public works and network utilities are an important component in providing for the social, economic, and cultural well-being of the people of the district.

Explanation – Public works and network utilities provide services that are essential to the functioning and well-being of the districts communities. These utilities provide such services as electricity, telecommunication, water and sewerage not only to households, but to commercial and industrial uses also.

The community benefit outcomes of the proposed activity relate to river management, floodway capacity and efficiency needs, assist in the prevention of lateral erosion and potential damage to existing erosion prevention works located immediately downstream of the Clifden – Tuatapere SH 99 Bridge.

Conclusion - It is therefore considered the proposed activity discussed in this report meets the objectives of SDP to protect communities from the adverse effects of natural hazards.

21. Assessment of Effects

21.1 Overview

Section 104 of the RMA requires that the consent authority, when making a decision on a resource consent application to have regard to the actual and potential effects on the environment of allowing the activity.

The environmental effects of the proposed activity are assessed in this section of the report.

21.2 Positive Effects

The primary purpose of the proposed activity is to provide a 7 year supply period of river sourced gravel for commercial needs throughout the Western Southland area. However, through working with ES CMD Waiau Catchment manager Mr. Paul Pollard the activity delivers factors associated with regard to river management.

Additional positive effects of the proposed activity are:

- Undertaking a gravel extraction activity within a reach of the Waiau River where long term availability of resource is identified as available and sustainable with regard to river form and natural river processes;
- Provides a full managed no community cost solution to floodway capacity and efficiency issues within a naturally aggrading river form;
- Provides a degree of protection of the historically well used beach high point for the endangered Black-billed Gulls and clean gravel areas for other riverine nesting birds as discussed in Section 21.9.

Conclusion - Overall it is considered the proposed activity will deliver a number of positive benefits to riverine nesting birds and providing important quality access to the Waiau River corridor at a crossing point for local and international visitors to the area.

20.3 Effects on River Form and Character

The following description is provided on the form of the Waiau River concentrating primarily on the reach upstream and downstream of the proposed activity site. The selection of this section of the river has been made for reason that any effects to river form from the carrying out of the proposed activity are easily absorbed by the local environment and fitting within the landscape.

As discussed in Section 21.7 Landscape and Section 16 Catchment Data and Environmental Setting the middle reaches of the Waiau River consist of an incised channel generally single thread form with occasional channel splits and braids scattered throughout the reach.

This form is consistent with the characteristics of the Clifden reach immediately up and downstream of the proposed activity site.

Although the proposed activity consists of the removal of gravels from a floodway center line and outer floodway edge of the proposed work activity meander, the proposed activity will not alter the meander form or shape (other than height) within the context of the river reach or landscape.

From a visual perspective the existing channel form and braid features present throughout the reach will not be altered by the activity.

Conclusion - The default island of Area B is a feature within a river reach dominated by point bars, cut off islands and long meanders together providing bed stability within a rock bar dominated environment.

Explanation: River form can be viewed as the outcome of the continuous struggle between erosive potential of the river and the resistance of the valley floor materials. Over time, rivers develop a channel which is able to carry their normal flow. The form of this channel affects the flow of water in it and, through erosion and deposition, the flow modifies the form. The channel acts as a conveyor belt for the transport of sediment (gravels) moving intermittently towards the sea.

Rivers which exhibit characteristics of braiding and meandering form are known as "wandering" gravel rivers. They are highly dynamic and migrate irregularly across their floodplains. They have an active channel which is a zone of frequent channel change within the wider floodplain. Channel change affecting the rest of the floodplain occurs only during major high energy floods. Channel patterns vary through time as a result of flood events of different sizes.

These natural river processes are interrupted by human intervention associated with industry (hydro-electric generation), agricultural production and protection of communities from the effects of erosion and flooding through confining rivers and construction of river control/management infrastructure. Retention and maintenance of river control structures forms part of the equilibrium between preserving a balance of natural processes and national/local community well-being.

The above describes the Waiau River planform within the environment.

20.4 Effects on Water Quality

As discussed in Section 12 (Status of the Activity the only likely effect on water quality will be associated with a less than minor short term discharge of sediment during placement and removal of the temporary bridge providing access across a minor flow path to Area B as required. Generally this flow path is only active during above normal flows.

It is therefore considered this potential effect will be of a minor nature.

20.5 Effects on Recreation and Rural Residents

Recreation values over the Waiau River environment are held in high regard as providing opportunities for a wide range of quality activities including:

- Kayaking
- Swimming
- Picnics
- Jet Boating
- Angling
- Hiking

The Upper Waiau in particular is known for its world class fly fishing for large wild rainbow and brown trout.

In terms of effects on nearby rural residents, visually the activity is out of site being below a low terrace riser and generally screened by mature crack willows surrounding the downstream boundary of the proposed activity.

Conclusion - The most significant effects of the proposed activity on recreation and rural residents can best be described as positive with respect to continuous maintenance of quality access (foot/cycle/vehicle) to the beach areas and river in the vicinity of the works site.

20.6 Noise

Noise will be generated by machinery working on site. This will include hydraulic excavators, processing (screening / crushing) and truck movements to entering and exiting the site.

As the proposed activity site is confined to a section of the outer floodway and riverbed at the base of a low terrace riser and a buffer stand of crack willows, mitigation of noise generated by the activity will be achieved.

All machinery units to be used on the proposed activity site are of modern design in terms of noise suppression and fully compliant with operational noise requirements when working close to residential and urban environments.

Specifically noise generated by the proposed activity will comply with the rules defined by the Southland District Plan (Appeal Version September 2016) Section 2.11 - Noise, Rural Zone - Section 3.1.

Objective NSE.1 – To control the adverse effects of noise emissions and manage the potential for conflict between land use activities.

Policy NSE.2 Avoid, remedy or mitigate reverse sensitivity effects arising from noise emissions.

Straight line distances to the residences closest to the proposed activity site are:

- On terrace riser along the true left bank – 1,000 metres
- On cliff top along the true right bank Lillburn Valley Road – 546 metres

Conclusion – It is determined the proposed activity will have no negative impacts regarding noise on the surrounding community.

20.7 Landscape Values

The Waiau River although generally occupying a relatively wide highly modified floodplain upstream and downstream of the proposed activity site, the river remains largely a natural meandering form without river intervention works associated with erosion control, flood banking and river control works. Restraints to river form are generally limited to natural elements associated with the geology and landform.

Although surrounded by intensive beef, sheep and dairy farming operations the landscape is spectacularly scenic, a natural place that gives a genuine feeling of being barely touched by civilization and still wild at heart.

The Waiau River valley forms part of the west coast wilderness flowing in part adjacent to the Fiordland National Park. Soaring mountains and endless bush clad valleys make up an endless wild landscape of a truly grand scale and wilderness setting.

The proposed activity site siting within this landscape requires a significant degree of care to ensure the natural values of the landscape are not spoilt while at the same time providing a district needed resource.

Mr. Sutherland holds a strong awareness of those values through operation of the site to mitigate the negative aspects of a commercial operation within such a landscape through careful placement of processing plant, temporary small scale stockpiles and machinery not in use away from the floodway beach sites.

Of consideration is the location of the Category 1 Historic Place Clifden Suspension Bridge managed by the New Zealand Historic Places Trust being a major tourist attraction as part of the Southern Scenic Route.

At the same location is the Clifden Historic Bridge Conservation Campsite popular with travelers using the Southern Scenic Route.

Having regard to the location of the proposed activity within the environment discussed above Mr. Sutherland being a member of the local community and contractor is committed to ensuring mitigation of any components of the proposed activity on other users of the special landscape in which his activity is positioned.

The proposed activity processing site located on Area A is generally hidden from the view of those enjoying the upstream view and walk across the Historic Suspension Bridge.

Conclusion - After full and careful assessment of the identified effects on the landscape of the area it is considered any effects will be less than minor and absorbed within the infrequency and small scale of the various components of the proposed activity.

20.8 Effects on the Environment and Instream Life

Using data provided by the New Zealand Freshwater Fisheries Miscellaneous Report No. 9 – Review of Fish Distribution In The Waiau River Catchment Southland by: JW Hayes, SF

Davis, DJ Jellyman, IG Jowett. The Waiau River is recorded as supporting twenty five native fish species and four exotic species with many of the fish, mostly native species, are sea going at some stage in their life cycle

On a national basis the size and number of Rainbow and Brown Trout throughout the Waiau River, particularly the reach between Lake Manapouri and Lake Te Anau held in high regard as a natural wilderness experience by fly fisher folk throughout the world.

By comparison the lower river reach in the location of the proposed activity discussed in this report although not supporting the large numbers (70 – 100 large trout per km) of brown and rainbow trout as the upper reach (300 – 400 large trout per km) it is an integral and extensively used part of the overall high quality angling experience.

Note: Trout population numbers per kilometer provided by Fish and Game Southland data.

Conclusion - Potential effects and mitigation with regard to the proposed activity on the environment and instream life values will be less than minor being linked only to the placement and removal of the temporary bridge providing machine access across the occasionally active river overflow runner between Area A and Area B.

20.9 Effects on Riverine Dwelling Birds

Various reaches of the Waiau River is highly regarded as valuable habitat for a range of nationally significant and threatened riverine dwelling bird species as discussed in Section 1 - Preamble

Historically the endangered Black-billed Gull has been observed as nesting on a high point of the floodway gravel bar marked Area B - Appendix 1.

Note: *Observation as above is qualified as within the past two nesting seasons by overfly inspections of the river system as part of river management by ES CMD staff and involvement in Black-billed Gull nesting surveys.*

The Waiau River also provides good habitat for populations of several other riverine dwelling birds some of which are also endangered, notably Banded Dotterels, Black Fronted Terns and South Island Oyster Catchers.

From a bird nesting and habitat perspective river based gravel extraction has the potential to impact riverine bird ecology particularly by exposing nests and chicks to flood risk due to the lowering and flattening of river point bars and island features.

By contrast the proposed activity seeks to provide retention of the island safe high point used by the gulls through planned extraction of fine gravel and sand deposits at the downstream area of the island. That action will assist in a continuous river overflow through the bridged runner thereby providing a degree of protection to the gulls and chicks against predation by land based introduced predators such as cats, stoats and ferrets.

At the time of writing this report no other species of riverine dwelling birds were found nesting or inhabiting Areas A and A1. In the event that situation changes and other species are found nesting, mitigation as described in Section 13 will apply to the activity.

Having regard for the needs of riverine dwelling birds it is considered the proposed activity will provide positive benefits via a qualified response to the presence of any riverine bird species found to be utilizing the activity areas via mitigation of potential negative effects detailed in Section 13 - How the Works Will be Carried Out.

Additional positive benefits provided for riverine nesting birds are discussed in Section 4 – Deliverables.

Other possible negative impacts within the proposed five year Land Use Consent timeframe sought, are considered as visual in terms of commercial plant operating within a river bed environment and the raw nature of excavated surfaces until such time as weather and flood flows re-establish a natural appearance.

In conclusion of an assessment of the scope and nature of adverse effects arising from the proposed activity discussed in Section Status of Activity are less than minor and can be avoided or mitigated.

Mitigation actions specifically regarding riverine nesting birds is based on “best management practice” established by KJ Sutherland when working within a riverbed environment.

That process requires that should any of the riverine bird species as described in Section 13 be observed as establishing nesting on the proposed activity site the following mitigation actions will occur:

- Cease operations at that location and mark out a temporary safe distance boundary isolating the birds to avoid initial disturbance;
- Contact Department of Conservation – Southland Conservancy requesting advice to determine safe work continuance distances and or mitigation of on-going disturbance of the nesting birds;
- Should safe distance requirements not able to be achieved, a re-plan of work stages and timeframes will be undertaken.

Conclusion - It is considered the above mitigation processes confirms Mr. Sutherlands commitment to ensuring mitigation is not only qualified, it is appropriate for any given situation that may arise.

It also demonstrates his knowledge and understanding of the potential impacts on the habitat values of riverine dwelling birds when operating a gravel extraction business in river bed environments.

22. Negative Effects and Mitigation

While some adverse effects are avoidable, overall it is considered that any adverse effects arising from the proposed activity can be avoided or mitigated as discussed and provided via several sections of this report.

Specifically, with respect to the potential for negative impacts on aquatic and riparian habitat and ecosystems, fish passage and biodiversity, the proposed work site is part of the significant ecological diversity of the Waiau River positioned within a world renowned outstanding landscape.

In considering all the ecological threats associated with the site, the only identified negative impact or threat arising from the proposed activity discussed in this report relates to the human activity associated with the small scale gravel extraction activity proposed at the Clifden site.

Conclusion - While some adverse effects arising from human activity are unavoidable and balanced against the values of the activity proposed, it has been determined that the potential adverse effects arising from the proposed activity discussed throughout this report, are less than minor and can be effectively avoided or mitigated.

23. Work Site Rehabilitation

Rehabilitation and general tidiness of the work sites will be continuous throughout the term of consent. The shallow extraction pit proposed within Area A will be continually shaped with a long shallow batter as the extraction activity progresses. The area surrounding the shallow pit will be kept in a tidy state maintaining in sympathy with the natural contours of the site.

24. Environment Southland and the Proposed Activity

The detail and data relating to the proposed activity discussed in this report primarily for the purpose of providing river run aggregate supplies for the Western Southland district is supported by ES CMD in responding to its functions associated with river management and the wellbeing, and social and cultural environment of the people of the region.

Western Southland township of Tuatapere via State Highway 99.

25. Consultation and Potentially Affected Parties

Written approvals to the proposed gravel extraction activity detailed in this report will be sought from the following potentially affected parties.

Potentially Affected Party	Address
Fish and Game – Southland Region	PO Box 159, Invercargill 9840 Attention: Mr. Zane Moss / Mr. Jacob Smyth Phone: 03 215 9117
Te Ao Marama Inc.	PO Box 7078, South Invercargill 9844 Attention: Stevie-Rae Blair Phone: 03 216 7400
Southland District Council	PO Box 903, Invercargill 9840 Attention: Mr. Kevin McNaught

	Phone: 0800 732 732
Land Information New Zealand	C/- Colliers International, PO Box 416, Queenstown 9348 Attention: Mr. Sam Ashworth Phone: 03 441 0790
Department of Conservation – Southland Conservancy	PO Box 743, Invercargill 9840 Attention: Mr. Phil Melgren / Jane Bowen Phone: 03 211 2400
Te Runanga o Ngai Tahu – Statutory Acknowledgements	Natural Resource Units, PO Box 13 – 046, Christchurch 8141 Attention: Cathy Begley Phone: 03 371 2781 or 03 366 4344
Fraser & Sharron Hampton	806 Lillburn Valley Road, RD 1, Tuatapere 9691 Phone: 03 2266 186
Arnold Gray	1889 Ohai Clifden Highway, Orawia, RD 2, Otautau 9682 Phone: 03 22 55 821
Peter Fowle	Clifden, RD 2, Otautau 9682 Phone: 03 22 55 842

26. Appendices- Maps and Plans

Appendix 1	Locality Plan
Appendix 2	Site Layout Plan
Appendix 3	Land Tenure Plan

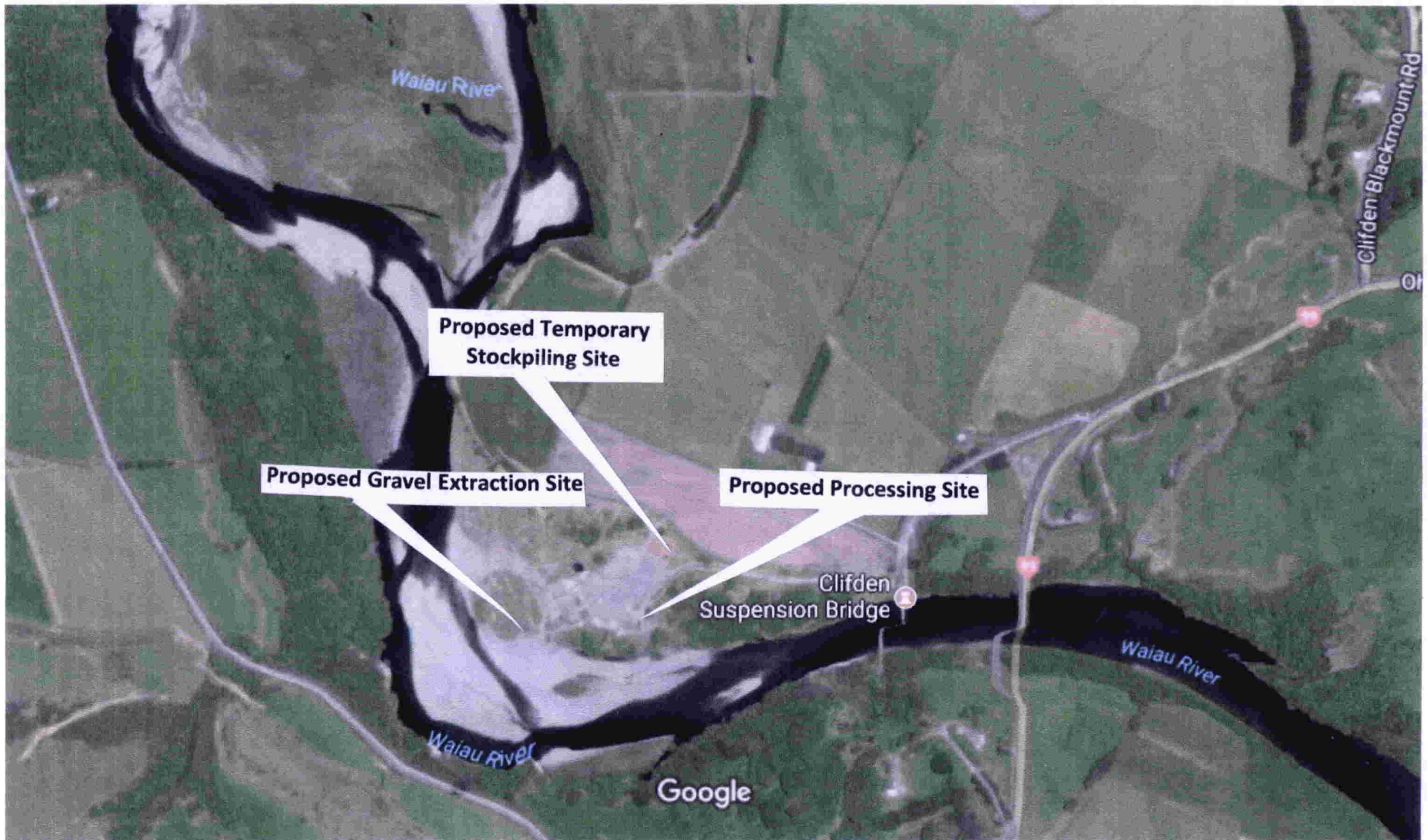
27. Glossary and Abbreviations

Term	Meaning
ES	Environment Southland
CMD	Catchment Management Division
SCB	Southland Catchment Board
WP	Regional Water Plan for Southland
RPS	Regional Policy Statement for Southland
PRPS	Proposed Regional Policy Statement for Southland
RMA	Resource Management Act 1991
SDC	Southland District Council
SDP	Southland District Plan
DOC	Department of Conservation
LINZ	Land Information New Zealand
MALF	Mean Average Low Flow
NWL	Normal Water Level
km	Kilometres
m	Metres
mm	Millimeters

m ³	Cubic metres
m ³ sec	Cubic metres a second
m ²	Square metres
cumecs	Cubic metres a second
deg.C	Degrees centigrade

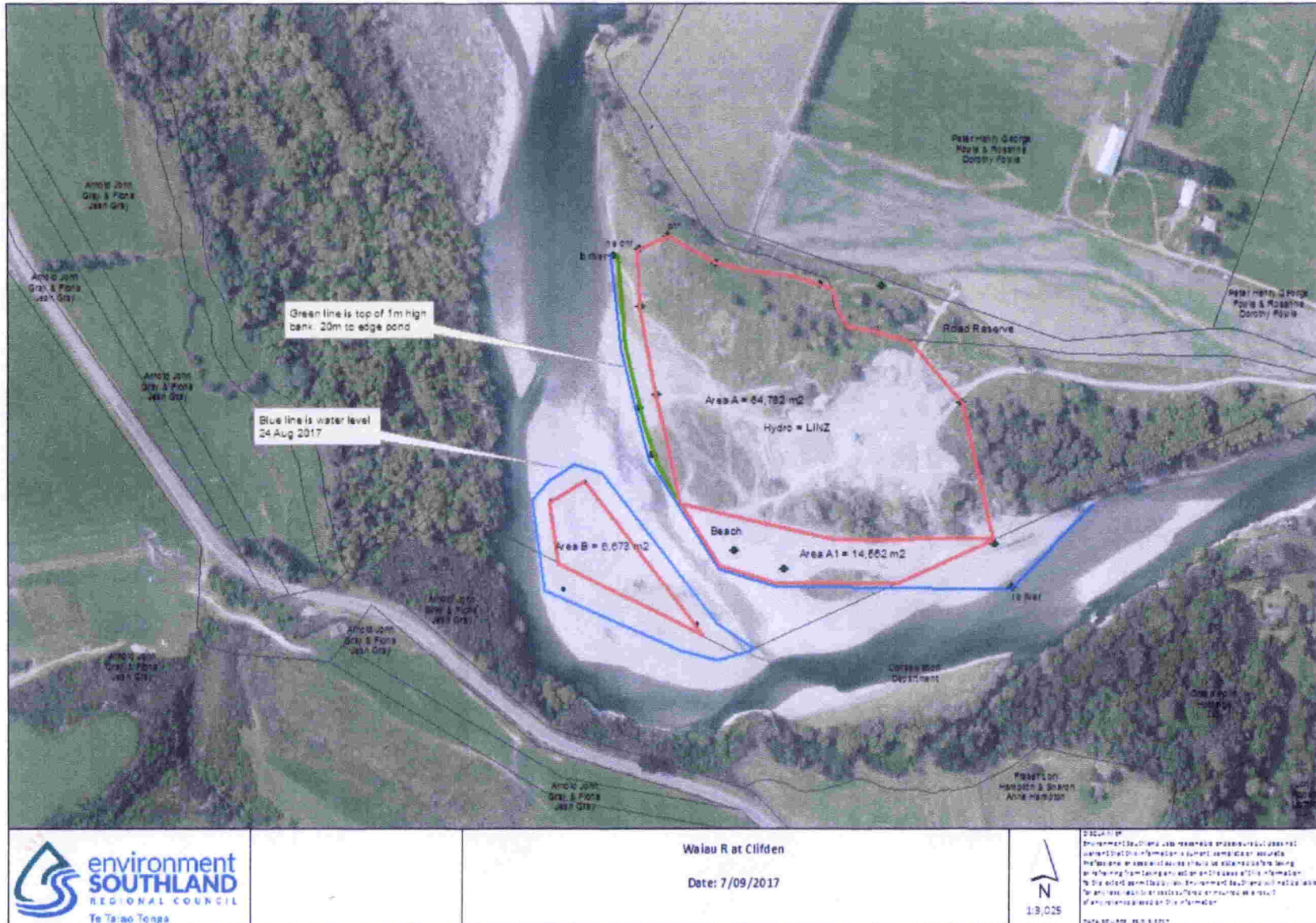
28. References

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- Hudson HR. 1997 *An Adaptive Management Strategy for Environmentally Sensitive Aggregate Management in High Energy Rivers in Southland*.
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Environment Southland Publication No. 2000-03 Prepared by Environmental Management Associates Ltd. 8 pages.
- MAF 1992 New Zealand Freshwater Fisheries Miscellaneous Report No. 9 – *Review of Fish Distribution in the Waiau River Southland*. By: JW Hayes, SF Davis, DJ Jellyman, IG Jowett.



Appendix 1 – Locality Plan - Proposed Gravel Extraction

KJ Sutherland - Waiau River, Clifden



Appendix 2 - Waiau River Clifden - Proposed Gravel Extraction Activity
Extraction Area Site Plan



**Proposed
Gravel Extraction Site**

Hydro - LINZ