

Otago Regional Council
70 Stafford Street
Private Bag 1954
Dunedin 9054

5 April 2019

Attention: Peter Christophers – Principal Consents Officer

Dear Peter

Resource consent application for Queenstown Lakes District Wastewater Network Consent

Please find enclosed an application for resource consent made on behalf of Queenstown Lakes District Council (QLDC). The application relates to the discharge of wastewater overflows from the QLDC network to freshwater receiving environments, or onto land in circumstances where it may enter fresh water.

Under the Otago Regional Plan: Water the proposal is a Discretionary activity pursuant to the following rules:

- 12.A Discharge of human sewage – 12.A.2.1;
- 12.B Discharge of hazardous wastes – 12.B.4.2; and
- 12.C Other discharges – 12.C.3.2

Notification

Pursuant to Section 95A(3)(a) of the Resource Management Act 1991 the applicant, Queenstown Lakes District Council, requests that the application be publicly notified.

Yours sincerely,



Alisha Robinson
Senior Planner

on behalf of

Beca Limited

Direct Dial: 03 968 4377
Email: alisha.robinson@beca.com

1 Resource Consent Application



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

(For Office Use Only)

Deposit Paid: \$

Charges / Deposits

A deposit must accompany the application (see page 8 for amounts). The applicant will be invoiced for all costs incurred in processing this application that exceed the deposit.

Council can accept electronic lodgement of applications if sent to public.enquiries@orc.govt.nz. Include "consent application" in the subject line.

Please complete the application in pen. For questions marked with an * you will find notes on page 4

1.* Applicant(s) Details

Applicant(s) name(s) in full: Queenstown Lakes District Council

OR Company Name (in full) _____

OR Names of Trustees (in full) if Applicant is a Trust _____

or Name of Incorporation _____

Postal Address Queenstown Lakes District Council

Private Bag 5007A

Queenstown

Post Code 9348

Street Address 74 Shotover Street

(not a P O box number) Queenstown

Post Code 9300

Phone Number Business 03 441 0499 Private _____

Mobile _____ Fax _____

Email Address mark.baker@qldc.govt.nz

(Please provide a valid and clear email address. The Council's default contact method for correspondence is via electronic means)

If you do not prefer contact by electronic means, please tick

1(a). Key Contact for Applicant Details

If the applicant consists of multiple parties (e.g. multiple consent holders, Trust etc) please outline who the key contact for the consent will be, if granted.

Key contact name(s) in full: Mark Baker

Postal Address as. above.

Post Code _____

Street Address _____
(not a P O box number) _____
_____ Post Code _____

Phone Number Business _____ Private _____
Mobile _____ Fax _____

Email Address mark.baker@qldc.govt.nz

(Please provide a valid and clear email address. The Council's default contact method for correspondence is via electronic means)

If you do not prefer contact by electronic means, please tick

2.* Consultant/Contact Details (if not applicant)

Name of Consultant/ Contact Person: Beca Ltd. - Alisha Robinson

Postal Address po Box 13960 Armagh Street
Christchurch Post Code 8011

Phone Number Business 03 968 4377 Private _____
Mobile _____ Fax _____

Email Address alisha.robinson@beca.com

(Please provide a valid and clear email address. The Council's default contact method for correspondence is via electronic means)

If you do not prefer contact by electronic means, please tick

3. On Site Supervisor/Manager Contact Details (if applicable)

Name of On Site Supervisor/Manager Person: _____

Postal Address _____
_____ Post Code _____

Phone Number Business _____ Private _____
Mobile _____ Fax _____

Email Address _____

(Please provide a valid and clear email address. The Council's default contact method for correspondence is via electronic means)

If you do not prefer contact by electronic means, please tick

4.* a) Are there any current or expired resource consents relating to this proposal?

Yes No

If yes, give Consent Number(s) and Description: _____



b) Do you agree to your current consent automatically being surrendered should a replacement consent be issued.

Yes No

c) Has there been a previous application for this activity that was returned as incomplete?

Yes No

If yes, give Consent Number(s) and Description: _____

d) Have you a pre-application lodged with Council for this activity?

Yes No

If yes, give pre-application Number(s) and Description: Attendance at project meeting by peter christophers.

e) Have you spoken to a Council staff member about this application prior to lodging this application?

Yes No If yes, please state name of staff member Peter christophers.

5. The applicant is (tick one): owner leasee prospective purchaser of the land on which the activity occurs.

6*. Who is the owner of the land on which the activity occurs/is to occur? (only complete if applicant is not the landowner)

Name of landowner: _____

Postal Address _____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile _____ Fax _____

Email Address _____

7*. Who is the occupier of the land on which the activity occurs/is to occur? (only complete if the applicant is not the land occupier)

Name of land occupier _____

Postal Address _____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile _____ Fax _____

Email Address _____

8*. Who leases the land on which the activity occurs/is to occur? (only complete if land is leased and it is not leased to the applicant)

Name of land leasee _____
Postal Address _____

Post Code _____
Phone Number Business _____ Private _____
Mobile _____ Fax _____
Email Address _____

9. Tick the consents required in relation to this proposal:

Water

- Take Surface Water Divert
 Take Groundwater Dam

Discharge onto or into:

- Land Water Air

Land Use:

- Bore construction Bore alteration
 Activities in or on beds of lakes or rivers or floodbanks
 Disturbance of contaminated land

Coastal: Activities in the coastal marine area (i.e., below mean high water spring tide)?

Where you have indicated the type of consent that is required, you must complete the appropriate Application Form before your application can be processed. Application Forms can be found on the Council's website: www.orc.govt.nz.

10. What is the maximum term of consent you are seeking? 35 years

11. Territorial Local Authority in which activity is situated?

- Dunedin City Council Queenstown Lakes District Council
 Clutha District Council Waitaki District Council
 Central Otago District Council

12*. Do you require any other resource consent from any local authority for this activity?

- Yes No

If Yes, please list: _____

Have these consents been applied for/issued? Yes No If Yes

If Yes, please give the date applied for or issued: _____

Notes on Application Form Details

1. Applicant(s) Details

A resource consent can only be held by a legal organisation or fully named individual(s). A legal organisation includes a limited company, incorporated group or registered trust. If the application is for a trust the full names of all trustees are required. If the application is not for a limited company, incorporated group or trust, then you must use fully named individual(s).

2. Consultant/Contact Details

If you are using a consultant/agent for this application put their details here. If you are not, leave question 2 blank.

4. Previous Consent

Do you currently have a resource consent to do the activity that you are applying to renew with this application? If so, please enter the permit number if known and a brief description including the date of issue and the expiry date.

6-8. Landowner, occupier and leasee

If you are not the landowner, land occupier or leasee of the land where the activity will be undertaken, you may be required to obtain their unconditional written approval to your application. On pg 6 there is a form that can be used.

12. Additional Consents

If you are carrying out earthworks or building work you may need other consents from either the ORC or your Territorial Local Authority.

Declaration

Before signing the declaration below, in order to provide a complete application have you remembered to:

Fully completed this Form 1 and the necessary Application Forms

Attached the required deposit.(or pay on line) (see page 8 for deposit that is payable)

Cheques payable to Otago Regional Council

\$5,000.00.

Please note: your deposit may not cover the entire cost of processing your application. At the end of the application process you will be invoiced for any costs that exceed the deposit. Interim invoices may be sent out for applications, where appropriate.

If the required deposit does not accompany your application, staff will contact you on the phone number provided on this form to request payment, and after 3 working days your application will returned if no payment is made for the required deposit.

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

I/we undertake to pay all actual and reasonable application processing costs incurred by the Otago Regional Council.

*

Name/s PETER JONATHAN HANSBY
(BLOCK CAPITALS)

Signature/s 
(or person authorised to sign on behalf of applicant)

Designation GM PROPERTY & INFRASTRUCTURE
(e.g., owner, manager, consultant)

Date 1/4/2019

Otago Regional Council Postal Address: 70 Stafford St, Private Bag 1954, Dunedin 9054

Consultation

– (consultation is not compulsory, but it can make a process easier and reduce costs).

Under Section 95E of the Resource Management Act 1991 (the Act) the Council will identify affected parties to an application and if the application is to be processed on a non-notified basis the unconditional written approval of affected parties will be required. Consultation with potentially affected parties and interested parties can be commenced prior to lodging the application.

Consultation may be required with the appropriate Tangata Whenua for the area. The address of the local Iwi office is: Aukaha, 258 Stuart Street, P O Box 446, Dunedin, Fax (03)477-0072, Phone (03) 477-0071, email: info@aukaha.co.nz. If you require further advice please contact the Otago Regional Council.

Good consultation practices include:

- Giving people sufficient information to understand your proposal and the likely effects it may have on them
- Allowing sufficient time for them to assess and respond to the information
- Considering and taking into account their responses

Written approval forms are appended to this form on Page 9.

Information Requirements

In order for any consent application to be processed efficiently in the minimum time and at minimum cost, it is critical that as much relevant information as possible is included with the application. **Where an application is significantly incomplete, the Consent Authority may decide not to accept the application for processing.**

Resource Management Act 1991

FOURTH SCHEDULE—ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

(Below are the provisions of the 4th schedule of the Act, which describes what must be in an application for resource consent, as amended in 2015.)

1 Information must be specified in sufficient detail

Any information required by this schedule, including an assessment under clause 2(1)(f) or (g), must be specified in sufficient detail to satisfy the purpose for which it is required.

2 Information required in all applications

- (1) An application for a resource consent for an activity (the **activity**) must include the following:
 - (a) a description of the activity;
 - (b) a description of the site at which the activity is to occur;
 - (c) the full name and address of each owner or occupier of the site;
 - (d) a description of any other activities that are part of the proposal to which the application relates;
 - (e) a description of any other resource consents required for the proposal to which the application relates;
 - (f) an assessment of the activity against the matters set out in Part 2;
 - (g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b). ("*document*" includes regional & district plans, regulations, national policy statements, iwi plans)
- (2) The assessment under subclause (1)(g) must include an assessment of the activity against—
 - (a) any relevant objectives, policies, or rules in a document; and
 - (b) any relevant requirements, conditions, or permissions in any rules in a document; and
 - (c) any other relevant requirements in a document (for example, in a national environmental standard or other regulations).
- (3) An application must also include an assessment of the activity's effects on the environment that—
 - (a) includes the information required by clause 6; and
 - (b) addresses the matters specified in clause 7; and
 - (c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

3 Additional information required in some applications

An application must also include any of the following that apply:

- (a) if any permitted activity is part of the proposal to which the application relates, a description of the permitted activity that demonstrates that it 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));
- (b) if the application is affected by section 124 or 165ZH(1)(c) (which relate to existing resource consents), an assessment of the value of the investment of the existing consent holder (for the purposes of section 104(2A));
- (c) if the 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, an assessment of the activity against any resource management matters set out in that planning document (for the purposes of section 104(2B))

4 (relates to subdivisions- not included here as subdivisions not ORC jurisdiction.)

5 Additional information required in application for reclamation

An application for a resource consent for reclamation must also include information to show the area to be reclaimed, including the following:

- (a) the location of the area;
- (b) if practicable, the position of all new boundaries;
- (c) any part of the area to be set aside as an esplanade reserve or esplanade strip.

Assessment of environmental effects

6 Information required in assessment of environmental effects

- (1) An assessment of the activity's effects on the environment must include the following information:
 - (a) if it is 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 (including safeguards and contingency plans where relevant) to be undertaken to help 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 person 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).
- (2) A requirement to include information in the assessment of environmental effects is subject to the provisions of any policy statement or plan.
- (3) To avoid doubt, subclause (1)(f) obliges an applicant to report as to the persons identified as being affected by the proposal, but does not—
 - (a) oblige the applicant to consult any person; or
 - (b) create any ground for expecting that the applicant will consult any person.

7 Matters that must be addressed by assessment of environmental effects

- (1) An assessment of the activity's effects on the environment 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.
- (2) The requirement to address a matter in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

Set out below are details of the amounts payable for those activities to be funded by fees and charges, as authorised by s36(1) of the Resource Management Act 1991.

Resource Consent Application Fees (from 1 July 2018)

Note that the fees shown below are a deposit to be paid on lodgement of a consent application and applications for exemptions in respect of water metering devices. This deposit will not usually cover the full cost of processing the application, and further costs are incurred at the rate shown in the scale of charges. GST is included in all fees and charges.

If you wish to make a payment via internet banking, or on line, the details are below. Please note the applicants name and "consent application" should be used as reference when paying the deposit -

BNZ George Street, Dunedin - 02 0900 0532547 00. For on line go to ORC.govt. nz and follow prompts

Publicly Notified Applications: ³

| | |
|-------------------------|----------------|
| * First application | \$ 5,000.00 |
| Concurrent applications | <u>225.00</u> |

Non Notified Applications and Limited Notified Applications: ³

| | |
|---|----------------|
| First application (except those below) | \$ 1,000.00 |
| Concurrent applications ¹ | 50.00 |
| Variation to conditions – s127 | 1,000.00 |
| Administrative variation – s127 | 500.00 |
| Exemptions from water measuring Regulations | 200.00 |
| Bores | 500.00 |
| Gravel | 500.00 |

| | |
|--|--------------------------------------|
| Hearings | |
| Payment for Commissioner request – s100A | Per Note 2 below Per Note 4 below |

| | |
|---|------------------|
| Objections | |
| Payment for Commissioner request – s357AB | Per Note 4 below |

| | |
|---|-------------------------|
| Transfers and Certificates Deposits: | \$ |
| Transfer of permits and consents | 100.00 |
| Priority Table | 100.00 |
| Section 417 Certificate | 200.00 |
| Certificate of Compliance | 200.00 |
| Section 125 – Extension of lapse date | 100.00 |
| All Other Costs | As per Scale of Charges |

| | |
|----------------------------------|-------------------------|
| Scale of Charges: | From 1 July 2018 |
| Staff time per hour: | \$ |
| * Executive staff | 235.00 |
| * Senior Technical/Scientist | 170.00 |
| * Technical/Scientist | 125.00 |
| * Field Staff | 100.00 |
| * Administration | 85.00 |
| Disbursements | Actual |
| Additional site notice | Actual |
| Advertisements | Actual |
| Vehicle use per kilometre | 0.70 |
| Travel and accommodation | Actual |
| Testing charges | Actual |
| Consultants | Actual |
| Commissioners | Actual |
| Photocopying and printing | Actual |
| Councillor hearing fees per hour | |
| *Chairperson | 100 |
| *Member | 80 |
| *Expenses | Actual |

Notes

- For additional permits in respect of the same site, activity, applicant, time of application, and closely related effect as the first application.
- The deposit payable shall be 90% of the cost of a hearing as calculated by Council in accordance with information contained in the application file and using the scale of charges. The amount payable will be due at least 10 working days before the commencement of the hearing. If the amount is not paid by the due date, then the Otago Regional Council reserves the right under S36 (7) of the Resource Management Act to stop processing the application. This may include cancellation of the hearing.

Should a hearing be cancelled or postponed due to the non payment of the charge, the applicant will be invoiced for any costs that arise from that cancellation or postponement.

Following completion of the hearing process, any shortfall in the recovery of hearing costs will be invoiced, or any over recovery will be refunded to the applicant.

Under Section 100A of the RMA, one or more submitters may make a request to have a resource consent application heard by one or more hearing commissioners who are not members of Council. In this case the applicant will pay the amount that Council estimates it would cost for the application to be heard had the request not been made, and the submitter(s) who made the request will pay, in equal shares, the cost of the application being heard that exceeds that amount payable by the applicant.

Further, the applicant may request to have a resource consent application heard by one or more hearing commissioners who are not members of Council. In this case, the applicant will pay the full costs.

3. Where actual and reasonable costs are less than the deposit paid, a refund will be given.
4. Where an applicant requests under s100A (for a consent hearing) or under s357AB (for the hearing of an objection) an independent commissioner(s); the applicant will be required to pay any increase in cost of having the commissioner(s).

Where a submitter(s) requests under s100A an independent commissioner(s) any increase in costs that is in addition to what the applicant would have paid shall be paid by the submitter. If there is more than one submitter who has made such request the costs shall be evenly shared.

Administrative Charges

The following one-off administration charges shall apply to all resource consent applications received:

| | |
|--|-----------|
| Publicly Notified and Limited Notified Applications | \$ |
| First application | 100.00 |
| Concurrent applications | 50.00 |
| Non-Notified Applications | \$ |
| First application | 50.00 |
| Concurrent applications | 25.00 |
| Other | \$ |
| Certificate of Compliance | 25.00 |
| Section 417 Certificate | 25.00 |
| Exemptions from water metering regulations | 25.00 |

Review of Consent Conditions

Following the granting of a consent, a subsequent review of consent conditions may be carried out at either request of the consent holder, or, as authorised under Section 128, as a requirement of Council. Costs incurred in undertaking such reviews will be payable by the consent holder at the rates shown in the Scale of Charges above.

Reviews initiated by Council will not be charged to consent holders.

Compliance Monitoring Charges (from 1 July 2017)

1. Performance Monitoring

The following charges will apply to the review of performance monitoring reports for all consent holders, except those listed in section 1.6 below. The charges shown are annual fixed fees per performance monitoring report or plan, and are inclusive of GST.

| | | From 1 July 2017 |
|--|--|------------------|
| | | \$ |
| 1.1 Discharge to Air Consent | | \$ |
| Measurement of contaminants from a Stack report | | 86.00 |
| Ambient air quality measurement of contaminants report | | 100.00 |
| Management plans and maintenance records | | 33.50 |
| Annual Assessment report | | 66.50 |
| 1.2 Discharge to Water, Land and Coast | | \$ |
| • Effluent Systems | Environmental Quality report | 46.50 |
| | Installation producer statements | 60.00 |
| | Return of flow/discharge records | 60.00 |
| • Active Landfills | Environmental Quality report | 58.00 |
| | Management Plans | 130.00 |
| • Industrial Discharges | Effluent quality report | 42.00 |
| | Environmental report | 92.50 |
| | Return of flow/discharge records | 60.00 |
| | Annual Assessment report | 50.00 |
| | Management Plans – minor environmental effects | 130.00 |
| | Management Plans – major environmental effects | 260.00 |

| | |
|---------------------|-------|
| Maintenance records | 30.00 |
|---------------------|-------|

1.3 Water Takes

| | |
|--|----------|
| Verification reports | 60.00 |
| Annual assessment report | 50.00 |
| Manual return of data per take | 80.00 |
| Datalogger return of data per take sent to the ORC | 50.00 |
| Telemetry data per consent | 35.00 |
| Administration fee – water regulations | 100.00 |
| Low flow monitoring charge* | |
| - Kakanui at McCones | 327.00 |
| - Unnamed Stream at Gemmels | 1,431.00 |

*Charge for monitoring sites established by the ORC specifically to monitor consented activities in relation to river flows.

1.4 Structures

| | |
|-----------------------------------|--------|
| Inspection reports for small dams | 130.00 |
| Inspection reports for large dams | 260.00 |
| Structure integrity reports | 80.00 |

1.5 Photographs

| | |
|---------------------|-------|
| Provision of photos | 60.00 |
|---------------------|-------|

1.6 Set Fees for Specific Consent Holders

Performance monitoring fees will be charges as 75% of actual costs for the following consent holders

Dunedin City Council
 Central Otago District Council
 Clutha District Council
 Queenstown Lakes District Council
 Waitaki District Council
 Ravensdown
 Contact Energy
 Trustpower
 Pioneer Generation

Additional charges may be incurred for new consents granted during the year.

2. Audit

Audit work will be charged at half of the actual cost incurred, with the actual costs being calculated using the Scale of Charges.

3. Non-Compliance, Incidents and Complaints

Enforcement work on consent conditions, and remedying negative effects from permitted activities – Scale of Charges.

Gravel Inspection and Management

Gravel extraction fee – \$0.66 per cubic metre (incl. GST). Where more than 10,000 cubic metres of gravel is extracted within a prior notified continuous two month period, the actual inspection and management costs will be charged, as approved by the Director Corporate Services.

Written Approvals of Persons Likely to be Adversely Affected

I/We (Please print full name/s) _____

of (Address) _____

I /we have read the full application for the proposal by (Applicant)

for a Resource Consent (Number) _____ to _____

and give my/our written approval to the proposed activity/activities.

In signing this written approval I/we understand that:

- The consent authority must decide that I/we am/are no longer an affected person, and disregard adverse effects on me/us
- That /we I may withdraw my/our written approval in writing before the hearing, or if no hearing before a decision is made on the application.

Signature/s _____ Date _____

(or person authorised to sign on behalf of affected party/parties)

Phone _____ Fax _____ Email _____

Please note: If this application is subsequently notified the above approval does not constitute a submission as required under Section 96 of the Resource Management Act 1991.

Written Approvals of Persons Likely to be Adversely Affected

I/We (Please print full name/s) _____

of (Address) _____

I /we have read the full application for the proposal by (Applicant)

for a Resource Consent (Number) _____ to _____

and give my/our written approval to the proposed activity/activities.

In signing this written approval I/we understand that:

- The consent authority must decide that I/we am/are no longer an affected person, and disregard adverse effects on me/us
- That /we I may withdraw my/our written approval in writing before the hearing, or if no hearing before a decision is made on the application.

Signature/s _____ Date _____

(or person authorised to sign on behalf of affected party/parties)

Phone _____ Fax _____ Email _____

Please note: If this application is subsequently notified the above approval does not constitute a submission as required under Section 96 of the Resource Management Act 1991.

7

Application To Discharge Water or Contaminants to Water



(For Office Use Only)

Consent No.: _____

This application form should be used for all discharges to water, e.g. to rivers, lakes, ocean, harbours, etc.

Show the location of the discharge on your map on Form 1. Include design plans and details with this application.

Part A: General

1. What is the discharge: Water or contaminant

(A contaminant is any substance or water which is likely to change the natural state of the water into which it is discharged in any way.)

2. What is the source of the water or contaminant (eg. Sewage treatment, industry, sewage pumping station, water treatment, rural activity)?

Sewage.

3. Describe the contaminant: wastewater / sewage from public system.

including, where appropriate:

Temperature: _____ °C pH: _____ Suspended solids: _____ g/m³

BOD₅: _____ g/m³ Faecal coliforms: _____ cfu/100mls

The chemical content, including heavy metals or toxic substances, nitrates, ammonia and dissolved reactive phosphorous and their toxicity to the receiving water / environment.

4. Is the contaminant treated in any way before being discharged? Yes No

If yes, describe treatment _____

5. What is the name of the water body into which the discharge is made (e.g. name of river, lake, bay, harbour, ocean, etc) and what is the map reference in NZTM 2000 at the discharge point?

Fresh water bodies in QUC district refer to application.

NZTM 2000: E _____ N _____

Part B: Assessment of Effects on the Environment (Contd.)

If you have answered yes to any of 2. above, describe what effects your discharge may have and the steps you propose to take to mitigate these.

Refer to consent application document attached.

(Continue on a separate page if necessary)

3. What alternative methods of disposal or discharge locations have you considered?

“

”

4. Why did you choose the proposed method of disposal and location point?

“

”

5. How will the equipment controlling the discharge be operated and maintained to prevent equipment failure, and what measures will be implemented to ensure that the effects of any malfunction are remedied?

“

”

6. What, if any, monitoring do you propose to carry out to ensure that the discharge does not have any adverse effect?

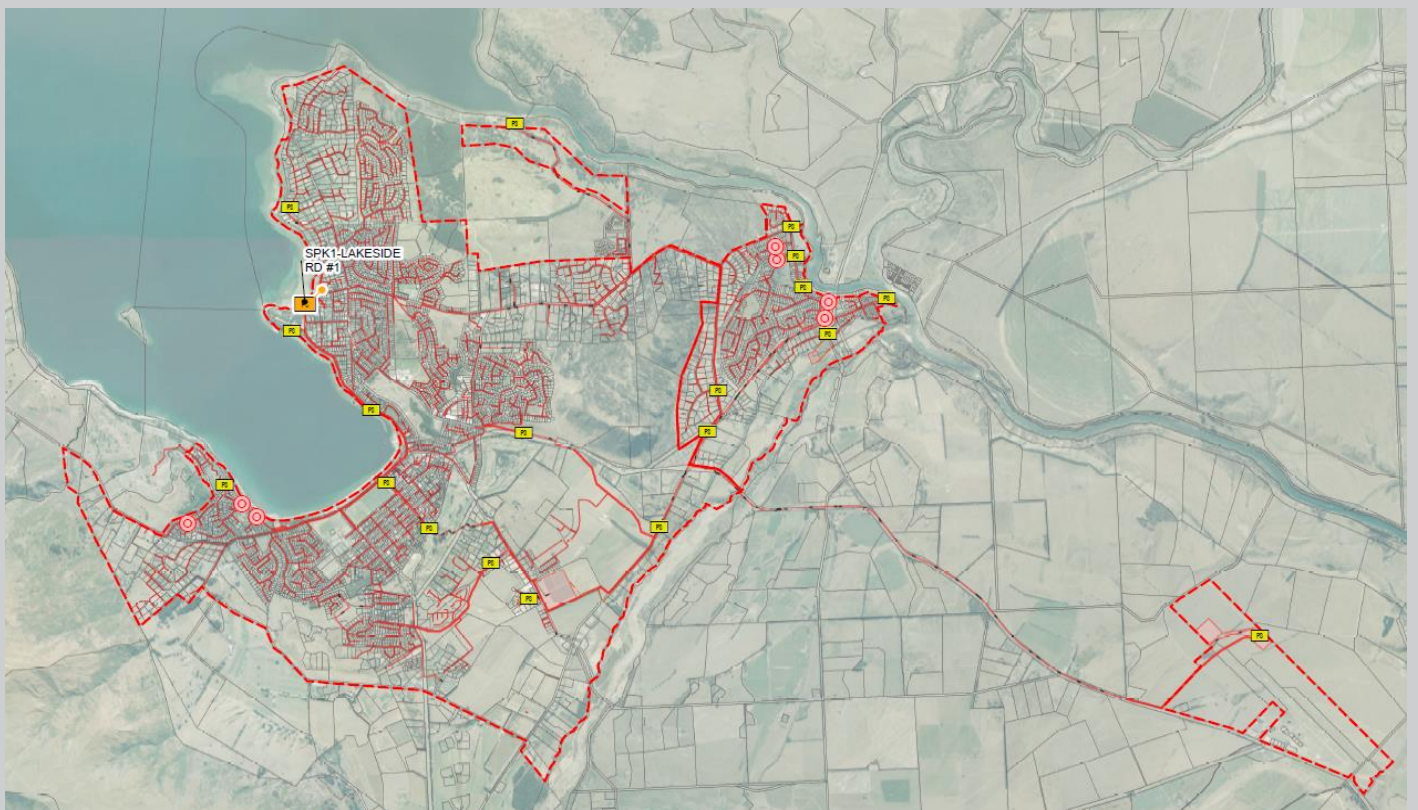
“

”

Queenstown Lakes District Council Wastewater Network Consent

Prepared for Queenstown Lakes District Council
Prepared by Beca Limited

5 April 2019



make
everyday
better.

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Revision History

| Revision N° | Prepared By | Description | Date |
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| Action | Name | Signed | Date |
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| on behalf of | Beca Limited | | |

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1 Introduction

1.1 Overview

Queenstown Lakes District Council (QLDC) is applying for resource consent from Otago Regional Council (ORC) to discharge wastewater overflows from its network to freshwater receiving environments, or onto land in circumstances where it may enter freshwater, as a result of blockages, breakages, system failures, extreme storm events, and capacity exceedance in the network.

Wastewater networks are critical for protecting communities from unnecessary exposure to wastewater. Exposure can result in an adverse impact to human health. Wastewater flows easily through the wastewater network pipes when only human waste and toilet paper is flushed, and when only soapy water is put down drains. Blockages and breakages occur in the wastewater pipes when foreign objects such as fats, sanitary items, wet wipes, construction offcuts, debris and dust are put into the network at pipe openings (in houses, businesses or at manholes). External influences such as tree roots invading pipes are also another cause of pipe damage. Storm events can also cause overflows from the network through capacity exceedance, but this is an uncommon occurrence in the Queenstown Lakes District.

Blockages and breakages in the wastewater network restrict wastewater from flowing freely through pipes and can result in a build-up of pressure in the system. In some instances, this pressure can cause wastewater to build up and overflow into the environment, typically out of manholes or at pump stations. If these overflows can't happen at these locations there is a risk that, instead, the build-up of wastewater can cause the wastewater to blow back into private property through toilets, showers, and sinks. This type of overflow has the potential to result in greater direct adverse impacts to human health than if a release occurs at a manhole or pump station. Having occasional overflows in these locations (i.e. manholes or pump stations) also protects the structural integrity of the public network. The public network enables the protection of public health of the wider community and environment.

The wastewater overflows described above currently occur from the QLDC wastewater network. They are not a new or proposed occurrence. These overflows can occur anywhere within the entire QLDC network and they are currently not authorised under the Resource Management Act 1991 (the Act). To address this, a District wide resource consent is being sought to authorise these overflows. In this Assessment of Environment Effects (AEE) and supporting documents, this District wide resource consent is referred to as the 'Network Consent'.

1.2 Philosophy for the Network Consent

The philosophy for the Network Consent was developed in the start-up phase of the project to focus on the management of actual and potential adverse effects on public health and the environment. While the likelihood of wastewater overflows can be managed to a certain degree, overflows can also be unpredictable and not completely avoidable.

As it is not possible to prevent the occurrence of overflows entirely, the Network Consent is sought with a key focus on how the actual and potential adverse effects from an overflow could be managed (avoided, remedied, or mitigated). The management of adverse effects has been categorised into the following:

- Physical response – how is an overflow physically responded to and what action is undertaken to minimise temporary and permanent adverse effects on public health, the environment, and cultural values; and
- Operational and maintenance improvements to the network – to reduce, over time, the likelihood of overflows occurring and therefore reducing the likelihood of adverse effects occurring.

The above two categorisations have driven the formulation and content of the proposed draft conditions of consent, which are included in section 7 of this AEE.

It was also recognised early on from a review of the Regional Plan: Water for Otago (RPW) that the objectives and policies related to wastewater discharges overall seek that adverse effects be avoided (as opposed to remedied or mitigated). As overflows cannot be completely prevented from occurring, the adverse effects resulting from overflows cannot necessarily be entirely avoided either. If an overflow that discharges to land is contained before reaching a waterbody, the impacts on that waterbody can be avoided. However, if an overflow to land is not able to be contained, or the overflow is directly to water, the adverse effects cannot always be avoided. On this basis, the proposed draft conditions of consent have been developed to avoid where possible, or otherwise manage, the adverse effects so that any temporary or resultant effect is minimised as much as practical and towards the avoid end of the effects scale.

1.3 Structure of report

This application for a discharge resource consent is made pursuant to Section 88 of the Resource Management Act 1991 (RMA). This document is a supporting AEE prepared by Beca Limited (Beca) in accordance with the Fourth Schedule of the RMA and comprises the following:

- An explanation of the resource consents and duration sought;
- A description of the proposed activity;
- A description of the existing environment;
- A summary of the consultation and engagement that has been undertaken prior to lodgement;
- An assessment of the actual and potential effects on the environment as a result of the proposed activity;
- An assessment of the proposed activity against the relevant statutory and non-statutory documents; and
- Draft proposed consent conditions.

Supporting ecological and public health assessments form part of and are appended to this AEE.

As part of early engagement with Ngāi Tahu, it confirmed that it would undertake a Cultural Impact Statement (CIS) for the application. At date of lodgement the CIS has not yet been received but is understood to be in progress.

1.4 Reasons for resource consent

The following resource consents are sought from ORC:

Table 1 – Reasons for Consent

| Rule | Rule summary | Activity Assessment and Status |
|--|--|--------------------------------|
| Regional Water Plan | | |
| 12.A Discharge of human sewage 12.A.2.1 | Except as provided for by Rule 12.A.1.1 to 12.A.1.4, the discharge of human sewage to water, or onto or into land in circumstances where it may enter water. | Discretionary |
| 12.B Discharge of hazardous wastes 12.B.4.2 | The discharge of any hazardous substance to water or onto or into land in circumstances which may result in that substance entering water is a discretionary activity, unless it is: (a) | Discretionary |

| | Permitted by a rule in 12.B.1; or (b) Provided for by a rule in 12.B.2 or 12.B.3. | |
|---------------------------------------|--|---------------|
| 12.C Other discharges 12.C.3.2 | The discharge of water or any contaminant: (i) to water; or (ii) Onto or into land in circumstances which may result in a contaminant entering water | Discretionary |

Adopting a bundling approach, resource consent is required overall for a **discretionary activity**. No other resource consents are required. A full assessment against the relevant rules and permitted activities is contained in Section 6.3 and Appendix F of this AEE.

1.4.1 Demonstration of overall compliance with standards

Schedule 4 of the RMA requires a description of the permitted activities proposed and a demonstration that these activities comply with the requirements, conditions and permissions for the permitted activity. The Regional Plan: Water does not have any permitted activities for wastewater discharges to water (via the wastewater system, overland, or transported by the stormwater system). As such no further assessment has been undertaken or included in this AEE.

1.4.2 Overall status for the resource consent

The overall status for the resource consent for the Network Consent is a **Discretionary activity** under sections 104 and 104B of the RMA.

1.5 Consent duration sought

The Network Consent is being sought for a consent duration of 35 years.

The adverse effects of a wastewater overflow discharge and the receiving environments are known entities that have been assessed for this application. These two entities are unlikely to change substantially over time. The proposed conditions of consent will avoid, where possible, and manage the adverse effects through a physical response and operational and maintenance improvements over time, so that any temporary or resultant effect is minimised as much as practical and towards the avoid end of the effects scale. Additionally, a review condition in accordance with section 128 of the RMA is proposed providing for the ability to review the conditions of consent should circumstances change.

QLDC has invested and set aside significant resources in future asset growth, management and maintenance. These resources are laid out throughout the QLDC 30 Year Infrastructure Strategy and the Long Term Plan, discussed below in section 2.3.

Consequently, QLDC seeks a consent duration of 35 years to reflect the nature of the discharges and the receiving environments, and to ensure consistency and security in future asset and financial planning including the compliance monitoring of the Network Consent by QLDC and ORC.

2 Description of Project

2.1 Scope of resource consent

As set out in section 1 of this report, this AEE is to support a resource consent to discharge wastewater overflows that occur from the QLDC network. The occurrence of wastewater overflows from the QLDC network across the District is an existing situation. Additionally, the Network Consent does not include discharges of wastewater from the existing QLDC treatment plants as these discharges are already consented under the RMA through ORC. Further, the Network Consent does not include discharges of wastewater from future wastewater treatment plants that QLDC may build.

The Network Consent includes the following QLDC owned and managed wastewater collection networks in the following locations (grouped by locations which connect to the same treatment plant):

- Queenstown, Arthurs Point, Frankton, Shotover Country and Lakes Hayes Estate, Lake Hayes, Arrowtown;
- Wanaka and Albert Town;
- Cardrona (part)
- Lake Hāwea; and
- Luggate (part)

The following wastewater network areas are not currently owned or managed by QLDC but have been included in the assessment of actual and potential adverse effects. This is because it is anticipated that in the future QLDC will either develop a wastewater network in these areas or take over the ownership and / or management of existing private wastewater networks in these areas:

- Kingston
- Glenorchy
- Cardrona
- Hāwea Flat
- Glendhu Bay
- Luggate
- Jacks Point and Village
- Hanley Farms
- Coneburn (industrial zoned area)
- Millbrook Resort area

The Network Consent will apply to the above areas either when they are constructed and become operational (if the infrastructure is developed by QLDC), or following RMA, section 224(c) approval as part of the subdivision process, when the infrastructure vests in QLDC (if the infrastructure is developed privately).

For clarity, the scope of the resource consent does not include wastewater overflows from the following areas in the District unless the existing QLDC wastewater infrastructure in these locations:

- Rural areas of the District, including where there are some small clusters of urban development such as Speargrass Flat, Makarora, Kinloch, Johns Creek, Wilson Bay, Drift Bay, Wye Creek and Bobs Cove.

Appendix A to this AEE contains a set of maps that show the existing QLDC wastewater network and indicatively the network boundaries including those future areas. These maps are provided for information purposes only to assist in understanding the network using a spatial tool.

QLDC has separate wastewater and stormwater networks and pipes. As overflows can occur from manholes in the wastewater network that are typically located in an urban street, there is the potential for the overflow to flow into the QLDC stormwater network via kerb channels and catch pits before it can be stopped and contained. Although containment and clean up include measures to “catch” the overflow within the pipe system, there is still the potential that some wastewater overflows could reach freshwater bodies through the stormwater network.

Accordingly, and as set out under section 1.4 and 7 of this AEE, resource consent is sought to authorise discharge wastewater overflows that have the potential to reach freshwater:

- Directly from the wastewater network;
- From the wastewater network via over land flow; and / or
- From the wastewater network via over land flow into the QLDC stormwater network.

2.2 The QLDC wastewater network

Reticulated wastewater networks are a key requirement of any urban area for the protection of human health. QLDC provides public wastewater services to protect the health of its communities and the environment and is enabled to do this by the Local Government Act 2002. The wastewater network conveys toilet wastes, grey water (e.g. household wastewater from kitchens, bathrooms and laundries) and trade wastes from commercial and industrial premises to wastewater treatment plants.

The QLDC wastewater network contains 421km of wastewater pipes and 65 pump stations¹ (illustrated on the indicative network boundary maps contained in Appendix A). The network carries 4,650,042m³ of wastewater per annum² and this number will continue to grow with a growing population and an annual increase in visitors to the district. Section 2.3 below provides further explanation on improvements to the wastewater network proposed by QLDC including in relation to increasing capacity to accommodate this anticipated growth.

Currently, Council wholly maintains seven public wastewater schemes throughout the Queenstown Lakes District which cover wastewater from Queenstown including Sunshine Bay and Fernhill, Arthurs Point, Frankton Road, Frankton, Lower Shotover including Quail Rise, Shotover Country, Lake Hayes Estate and area, Arrowtown, Wanaka, Albert Town, and Lake Hāwea. Council also maintains, in part, schemes in Luggate and Cardrona with the possibility that the remaining parts of these schemes could be transferred to QLDC ownership and management in the future. This will decrease septic tank use in these areas reducing the adverse effects from these on both public health and the environment.

¹ Reported in QLDC Asset Management Plan 2018.

² Reported in QLDC Asset Management Plan 2018.

This network uses a combination of gravity and pumped systems to carry wastewater to treatment plants. Typically, this conveyance is gravitational, carrying wastewater to natural low points (lakes, rivers). From here pumping stations lift the wastewater to higher points to continue under gravity to treatment plants.

The main Queenstown wastewater network pipes traverse the waters edge along Frankton Arm to Frankton beach where wastewater is then pumped over to the Shotover Treatment Plant. Similarly, the main wastewater line from Wanaka runs along State Highway 6 to the treatment plant located near Wanaka airport.

As outlined in Sections 1.1 and 1.2, overflows can occur anywhere in the QLDC network due to blockages and breakages occurring restricting the flow of wastewater. This can result in the build-up of wastewater in the pipes and can cause it to back up and overflow into the environment. Blockages and breakages are typically caused from anything that is not water, human waste, toilet paper, or soaps being put down pipes into the network and from third party damage from tree roots and construction in the vicinity of pipes.

Overflows typically occur at manholes (most common) and pump stations, and can flow overland directly into waterbodies, or overland into catch pits and into the stormwater network to the final point of discharge, being a waterbody. This is reflective of all wastewater networks and illustrates that overflows cannot be entirely prevented, or their locations known prior to their occurrence.

To help manage overflows across the wider system engineered overflow points also exist within the network. However, overflows from these points are uncommon because the points are designed to contain the overflow before it were to reach land or water and are network alarmed. The location and type of currently existing engineered overflows are identified in Table 2 below.

Table 2 – Engineered Overflows

| Scheme | Location | Receiving Environment | Unit Type | Overflow Type |
|---------------|-----------------------------------|--|--------------------|---------------|
| Wanaka | Aubrey Road, Wanaka | Lake Wanaka | Pump Station | Pipe |
| Arthurs Point | Oxenbridge, Tunnel Road | Shotover River | Pump Station | Pipe |
| Queenstown | Allan Crescent, Frankton | Lake Wakatipu | Wastewater Main | Weir |
| Queenstown | 40 Remarkables Crescent, Frankton | Kawarau River | Wastewater Manhole | Pipe |
| Queenstown | Kawarau Place, Frankton | Kawarau River | Pump Station | Pipe |
| Queenstown | Jubilee Park, Park Street | Lake Wakatipu | Pump Station | Pipe |
| Queenstown | Bayview, Kelvin Heights | Lake Wakatipu | Pump Station | Pipe |
| Wanaka | 68 Alison Ave, Albert Town | Clutha River, via stormwater flow path | Pump Station | Pipe |

2.3 Operation, maintenance, and planned improvements of the wastewater Network

QLDC owns and operates the vast majority of wastewater networks throughout the District with some private networks, such as Millbrook, connecting for bulk conveyance treatment and disposal to wastewater treatment plants, and other communities with wholly privately contained wastewater networks and treatment systems. As of 2018, QLDC contracts the maintenance and operation of its wastewater network out to Veolia and Fulton Hogan.

The current 10 Year Plan states that the Queenstown Lakes District is identified as being the fastest growing district in New Zealand and as such has ambitious infrastructure projects moving forward. In the 2017/18 Annual Plan, 9% of Council's operating expenditure was on wastewater.

The Infrastructure Assets Management Strategy 2018 – 2048 has an increased focus on infrastructure planning and signals increased capital investment for the three waters. Specifically, the document identifies the need to: “reduce the likelihood of polluting high contact recreation areas: Seek and operate within resource consents. Actively monitor and invest in the wastewater networks to reduce the adverse effects of wastewater contamination at these key sites (i.e. do not have large wastewater facilities that could pollute the beaches and areas where people are most likely to have contact/recreational activities)”³.

The strategic objectives for three waters management in the QLDC 10 Year Plan are:

- to ensure no contamination of public water supply attributed to three waters infrastructure;
- adverse effects on the environment from three waters infrastructure are managed/mitigated; and
- ensure compliance with resource consents.

In addressing the issues identified by the 10 Year Plan, QLDC expects to spend around \$816M on service improvements, increased capacity and extensions. Specifically, QLDC plan to spend \$105M between 2018 and 2028 on to the wastewater network including pump stations, pipes and treatment plants⁴.

The indicated investment of capital into the wastewater systems is long term, i.e. in excess of 30 years. This is because the QLDC wastewater network is in fact relatively young. The average age of the infrastructure that makes up the network is 21 years. Wastewater pipes have an expected lifespan of 60-80 years. The investment of capital is therefore aligned with when certain parts of the system will need upgrading or replacing.

The predominant cause of wastewater overflows is foreign objects in the systems, rather than age-related failures of the infrastructure. This means that it is important to educate the community that the wastewater network is made to transport human waste, toilet paper, soaps, and grey water only, and that anything else contributes to blockages and breakages that cause overflows and may affect the integrity of the system.

2.4 Physical response to wastewater overflows

All wastewater pump stations within the QLDC network include level alarms, which are used to advise the network operator if there is an issue with the pump station, causing the water level to rise above normal levels. The alarm notifications are sent via text message to the duty operator(s) to allow action to be taken before an overflow occurs. Each of the wastewater pump stations in the network are visited regularly to

³ QLDC 10 YEAR PLAN 2018–2028 [VOLUME 2], June 2018

⁴ QLDC 10 YEAR PLAN 2018–2028 [VOLUME 1], June 2018

ensure the required preventative maintenance is undertaken, and to allow any potential problems to be identified and corrected as early as possible.

If an overflow occurs that is not able to be prevented or picked up through the alarm systems, it is typically called in by a member of the public. Appendix B to this AEE contains a flow chart which sets out QLDC's physical response process for responding to wastewater overflow events. This response process is implemented by its operation and maintenance contractors regardless of if the overflow is discovered by them, Council, or a member of the public. The response process flow chart has been consolidated specifically for the purpose of this consent.

As the flow chart explains, as soon as QLDC knows from a Council officer or a member of the public that an overflow has occurred it contacts its operations and maintenance contractor who aims to reach the location within 60 minutes of notification. People and equipment are available in both Wanaka and Queenstown 24 hours a day, 7 days a week to respond to an overflow. The 2017/2018 median response times were 22 minutes with a key performance indicator of 60 mins⁵.

Once the response team arrives at the overflow location they, as a priority, stop and contain the overflow, and take steps to keep the public safe from unnecessary exposure to the wastewater. This may include closing off recreational areas such as beaches and waterways along with access to these areas.

In particular, in the event that wastewater has reached a lake or river, signage is erected to warn the public of the biological hazard. Where the overflow has led to visible floating debris, a boom is used to contain and remove the floating material.

The relevant authorities (Otago Regional Council and Ministry of Health) are notified as soon as practical, and the affected waterbody is tested until the water quality is back to acceptable swimming guideline levels in the 'Microbiological water quality guidelines for recreational water quality' (Ministry for the Environment Guidelines for Recreational Water Quality).

Following the site being made safe, the crew work to restore the service. Typically, this involves jetting the pipes to dislodge the blockage, allowing the wastewater to flow freely again. Screen devices are used to capture the debris dislodged during jetting to avoid causing issues elsewhere in the network. The 2017/2018 median resolution time was 151 minutes with a key performance indicator of 240 minutes⁶.

On occasion the team responding to the event may determine that further work is required to prevent the risk of the issue reoccurring. The repair work is either carried out onsite immediately, or if this is not possible, it is scheduled to be done as soon as possible.

⁵ QLDC Annual Report 2017-2018

⁶ QLDC Annual Report 2017-2018

3 Description of the Existing Environment

3.1 Queenstown Lakes District

The Queenstown Lakes District measures some 8,500m² on the eastern side of the Main Divide of the Southern Alps. It reaches from Makarora and Lakes Wanaka and Hāwea in the north to Lake Wakatipu, Queenstown and Kingston in the south.

The District is notable for its natural features and dramatic scenery consisting of the high alpine peaks of the Southern Alps, bright blue alpine lakes and river valleys. These features attract large numbers of international and domestic tourists year-round providing for a range of activities. The district is well known for adventure tourism, including jetboating, skydiving, bungy jumping, skiing, mountaineering and other activities such as sightseeing, shopping, historic townships and wineries and its generally high water quality. The extensive range of activities, sights and locations provided throughout the district has ensured the development of markets from high value, luxury tourism to backpackers, hostels and freedom camping.

The District is the fastest growing District in New Zealand and is subsequently recognised by central government as a high growth district. The majority of this growth is centred around Queenstown and Wanaka, the two largest urban areas in the District contributing to a growing local economy. As well as domestic growth steadily increasing in these areas, they are also hugely popular with tourists. ..

3.2 Surrounding Land use

The wastewater network traverses residential, commercial, industrial, town centres, townships, special and open space areas and as such the potential receiving environment in the event of a wastewater overflow can be varied.

Subsequently, the type of waste in the wastewater pipes may be varied depending on the land use activity. For example, wastewater from commercial and industrial zones may have both domestic wastewater and trade waste, whereas residential and open space zones will primarily have domestic wastewater due to the activities occurring in these zones.

3.2.1 Areas where large groups will congregate

As a consequence of the random nature of the wastewater overflows there is always a potential that a wastewater overflow could occur in an area where groups of people congregate for example, a park, waterfront, school etc. There are a number of these types of sites located around the Queenstown District such as Ben Lomond Scenic Reserve, Historic Arrowtown Chinese Settlement, Lake Hayes, Lake Wanaka and Lake Wakatipu waterfronts and the Wanaka Recreational Reserve. Some of these areas are close to waterbodies, some are not. In any case, QLDC has an investment matrix assessment which identifies the high comparable benefit for increased infrastructure investment in these public areas. Greater investment is accordingly made in infrastructure (including wastewater infrastructure) near these areas.

3.3 Waterbodies and their receiving environments

In an overflow event there is potential for wastewater to discharge to a surface waterbody. An Ecology Report prepared by Ryder Environmental Limited (Appendix C) categorises similar waterbodies within the Queenstown Lakes District into the following:

- Large Lakes;
- Medium Lakes;
- Streams;
- Small – moderate Rivers;

- Moderate – large Rivers; and
- Very Large Rivers.

These waterbodies are summarised below, with in depth analyses on characteristics, values and ecological make-up analysed within the Ecology Report.

3.3.1 Large Lakes

Lake Hāwea, Wakatipu and Wanaka are large, deep glacial lakes fed by large alpine rivers that drain from the Southern Alps and foothill ranges. These large lakes are known for the high water quality with clear waters. These clear waters are in part due to the low nutrient availability which results in a low biomass of phytoplankton. High water clarity allows high penetration of ultra-violet radiation into the water which kills bacteria and results in a very low *E.coli* concentration.

Lake Wakatipu, its high water clarity and its scenic characteristics are recognised in the Kawarau Water Conservation Order (Kawarau WCO). Similarly, the Lake Wanaka Preservation Act 1973 (LWPA) recognises the value the community places on the water quality of Lake Wanaka.

3.3.2 Medium Lakes

Lake Hayes is a medium sized lake which is commonly photographed due to the highly scenic surrounding landscape being reflected in its waters. Additionally, this lake is commonly used for swimming and boating activities. Lake Hayes is a nutrient rich lake which is due to historic catchment development and land use intensification as well as contemporary activities in the catchment which can result in a periodic algal bloom.

Lake Hayes does not meet the water quality targets Schedule 15 of the Otago Regional Plan: Water due to the combined effects of contemporary nitrogen discharges in combination with the internal load of phosphorus from historic land use practices.

3.3.3 Streams

A number of small streams flow through the urban areas of Wanaka and Queenstown including Bullock and Horne Creeks which are identified in Schedule 1A of the Regional Plan; Water as having a significant habitat for trout spawning and juvenile rearing. Additionally, Horne Creek is also identified as having unimpeded access through to Lake Wakatipu and being weed free.

The Ecology report identifies a lack of detailed information on the water quality and ecology of these smaller streams. There are potentially native fish present in these streams such as longfin eel, kōara and upland bully, all are classified as 'at risk – declining' species.

Given their small size, streams are most likely to be of less significance to contact recreation, however any wastewater discharges to these smaller streams may carry contaminants to larger water bodies.

3.3.4 Small – medium Rivers

Three small – moderate sized rivers flow through or adjacent to urban areas within the Queenstown Lakes District; Arrow River, Cardrona and Luggate Creek. Both the Arrow and Cardrona Rivers have a high degree of naturalness.

3.3.5 Medium – large Rivers

The Hāwea and Shotover Rivers are identified as having outstanding characteristics from Schedule 1A of the Regional Plan: Water and the Kawarau WCO. These rivers are heavily used for rafting, kayaking and jetboating.

3.3.6 Very Large Rivers

The natural values of the Clutha / Mata-Au and Kawarau Rivers from Schedule 1A of the Regional Plan; Water and Kawarau WCO include wild scenic characteristics, scientific values, and for recreational purposes.

3.4 Drinking water take locations

The supply of drinking water in New Zealand is governed by the relevant provisions of the Health Act 1956 and the *Drinking-water Standards for New Zealand 2005 (revised 2018)* (DWSNZ). While that regime is the primary means of ensuring the safe and wholesome supply of drinking water, particularly through the requirements for testing and treatment of water drawn from ground and surface sources, maintaining the underlying quality of those sources is an essential part of the process. In the event of an overflow, there is the possibility for wastewater to reach groundwater via seepage or flows from surface water identified in section 3.3.

In the Queenstown Lakes District, community water supply is secured for the two largest urban areas of Queenstown and Wanaka via surface intakes from Lakes Wakatipu and Wanaka. Community water takes outside Queenstown and Wanaka, which are comparatively much less than for the two large urban areas, generally draw water from aquifers.

The Queenstown Lakes District aquifers are found to have scattered areas of glacial-gravel deposits, separated by schist ridges and major bedrock hills. The various aquifers in the Wakatipu basin are mainly of value for providing domestic water to public, communal and individual water supplies, with a very high volume abstraction being used for irrigation or industry. The aquifers are replenished by rainfall, rivers, creeks, feed springs and out-flowing seepage into the basin⁷.

Table 3 below outlines the existing primary community water takes, their location and treatment.

Table 3 – Queenstown Lakes District community water takes

| Urban Area | Take Type | Take Location | Treatment |
|---------------|-----------|---|-------------------------|
| Arrowtown | Bore(s) | Adjacent to Bush Creek, Arrowtown | UV and Chlorine |
| Arthurs Point | Bore(s) | Adjacent to the Shotover River, Arthurs Point | UV and Chlorine |
| Glenorchy | Bore(s) | Glenorchy/Queenstown Road | Chlorine |
| Hāwea | Bore(s) | Scotts Beach, Lake Hawea | UV and Chlorine |
| Lake Hayes | Bore(s) | Northern end of Lake Hayes | UV, Chlorine, Lime (pH) |

⁷ Queenstown Lakes District Council Three Waters Asset Management Plan 2018

⁷ Investigation into the Wakatipu Basin Aquifers, Jens Rekker (July 2014)

| | | | |
|------------------|--------------|---|---|
| Queenstown | Lake Intakes | Kelvin Heights + Two Mile (Fernhill) | Chlorine at both intakes and UV at Kelvin Heights only. |
| Wanaka | Lake Intakes | Beacon Point + Western | Chlorine |
| Shotover Country | Bore(s) | Adjacent to the Shotover River and Shotover Country housing development | Filtration, UV and Chlorine |

3.5 Cultural and Heritage Sites

The Queenstown Lakes District Plan does not specifically identify sites of significance to mana whenua. However, it is acknowledged that the District and its waterways are of much importance to mana whenua. Accordingly, engagement has occurred with Ngāi Tahu via its appointed representatives Aukaha and Te Ao Mārama to ascertain any physical and metaphysical sites of significance that the project should be aware of and consider.

Through this engagement Ngāi Tahu confirmed it would undertake a Cultural Impact Statement (CIS) to provide understanding of the values and actual and potential cultural effects. At the time of lodgement this CIS had not been received but is understood to be in progress.

4 Consultation and Engagement

QLDC have consulted and engaged with a number of parties during the preparation of the consent application and the assessment of the environmental effects. This is described below. Appendix E contains further supporting information.

4.1 Otago Regional Council

While not consultation, the project team has met with the Resource Consent officers of Otago Regional Council to discuss the Network Consent, the philosophy for the consent being adopted and implemented by QLDC, the structure for the proposed draft conditions of consent (i.e. physical response and improvements over time to the network), and the parties with whom QLDC has consulted with pre lodgement of the application.

A further discussion was held with ORC over the telephone⁸ to provide an update on progress in preparing the resource consent application including technical assessments and engagement with Stakeholders. The public engagement undertaken in mid-November (see below) was also mentioned. ORC relayed it was agreeable to the process being undertaken and that it could not, at that point, think of anything fundamental missing in the assessment or with the engagement being undertaken.

4.2 Ngai Tahu: Aukaha and Te Ao Marama

Aukaha manage engagement on behalf of Ngai Tahu with four rūnanga who have an interest in the Queenstown Lakes District on the north side of the Clutha River. Te Ao Mārama manage engagement on behalf of Ngāi Tahu with three rūnanga who have an interest in the Queenstown Lakes District on the south side of the Clutha River.

The project team, Aukaha and Te Ao Mārama have met three times to discuss the purpose of the resource consent being sought in relation to wastewater overflows within the Queenstown Lakes District. The first was an individual meeting with each by the project team, who travelled to Dunedin and Invercargill respectfully, to provide an introduction to the project and relay the desire by QLDC to work collaboratively with Ngāi Tahu on the project. The second and third meetings are described below. Aukaha and Te Ao Mārama has liaised the rūnanga in regards to the preparation of a CIS.

4.3 Fish and Game

A meeting with Nigel Paragreen from Fish and Game discussed sensitive areas such as spawning sites, and disruptions to the ecological function. A follow up round table hui with the QLDC project team, Ngāi Tahu, Department of Conservation and Ministry of Health was also held.

4.4 Department of Conservation

A meeting with Nardia Yozen from Department of Conservation (DOC) outlined that water quality is a key interest area followed by recreational impacts and the cultural sensitivity relationship / connection to Ngāi Tahu values and interests. Additionally, Suzie Geh attended the first stakeholder hui, Trudy Anderson and Lisa Nilsen attended the second hui. DOC also provided written information on its values which has been taken into account in undertaken this assessment.

⁸ On 1 November 2018.

4.5 Ministry of Health

The project team met with Susan Moore of the District Health Board / Ministry of Health. At this meeting, MoH confirmed that NIWA was suitably qualified and experienced to undertake a public health assessment.

4.6 Combined Stakeholder Engagement

4.6.1 Stakeholder Hui – 27 September 2018

Collaborative engagement was undertaken with Te Ao Mārama, Aukaha, Department of Conservation, Fish and Game, and Ministry of Health, at a round table Hui held on the 27th of September 2018 in Queenstown. The project team, including Ryders and NIWA, presented and discussed technical assessment methodology, how QLDC responds to any overflow event, and provided a high level run through of the proposed draft conditions. The stakeholders all expressed appreciation with the update on project progress and raised no major concerns regarding the proposed methodology for the ecological and public health assessments. MoH agreed in principle with the public health assessment methodology proposed. The project team found it useful to have all of the key stakeholders together to discuss the project and to raise aspects of the project that were particularly important to them.

4.6.2 Stakeholder Hui – 14 March 2019

A second stakeholder hui was held on 14 March 2019 in Queenstown and was attended by Te Ao Mārama, Aukaha, Department of Conservation, Fish and Game, and Ministry of Health. The hui provided an update of work undertaken since the last hui and provided an open table discussion on any queries and / or concerns. Information regarding notification and the consent duration that QLDC is seeking was provided and discussed. Additionally, Otago Regional Council in its regulatory role (processing and deciding on the application) attended to receive a project update and listen to feedback provided by the stakeholders.

4.7 Community (Public) Consultation

Appendix E contains Community Consultation material related to the below engagement that was specifically undertaken for the project. As part of its communications and engagement programme for the year QLDC has via media (including social), Scuttlebutt, and at community forums, provided educational information to the community about how to use the wastewater network and around trade waste disposal.

4.7.1 Scuttlebutt Article – 19 October 2018

An article prepared and issued in the November Scuttlebutt Newsletter to inform the public of the resource consent application to ORC and to provide education around what causes overflows. The article educates the public on what can and cannot go into the wastewater network pipes and how they can play their part to reduce the likelihood of blockages and breakages in the future. QLDC intends to continue with regular similar articles for educational purposes in future.

4.7.2 Media Release – 29 October 2018

A media release was prepared and issued by QLDC to promote attendance at the drop-in sessions for the public. The media release advised the times and locations for the sessions.

4.7.3 Facebook – 2 November 2018

The drop in sessions were advertised via the QLDC Facebook page to notify and inform the community.

4.7.4 Community Drop in Sessions – 8 November 2018 and 12 November 2018

A community drop in session was held on 8 November 2018 at the Queenstown Events Centre. Poster material (contained in Appendix E) was available at the session. As well as publicly advertising this session the relevant Community Associations were also specifically invited along. Only two members of the public from the Lakes Hayes Estate Community Association attended the drop in. No direct concerns were raised regarding the overflows.

A second drop in session was held on 12 November 2018 at the Wanaka Centre to cater for Wanaka and Hāwea and the surrounding areas. The posters in Appendix E were also available at this session. Similar to the Queenstown drop in session the relevant Community Associations were specifically invited along to the event. QLDC also made direct contact with the Guardians of Lake Wanaka Trust and the Upper Clutha Trust Board to offer individual meetings, but both groups were happy to send along representatives to the drop in session.

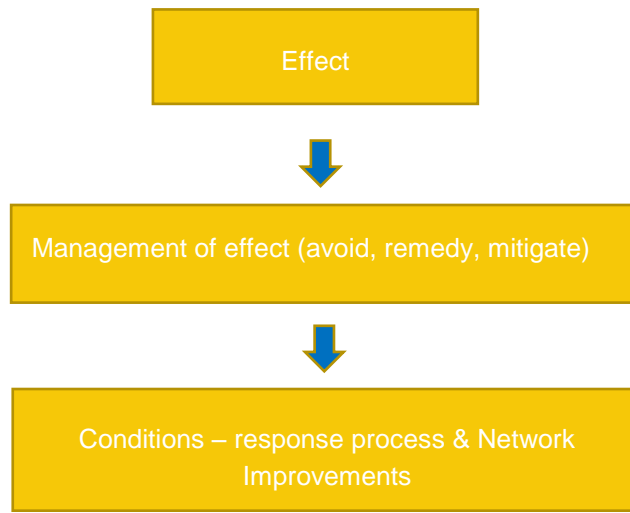
Ten people attended the Wanaka drop in session. A good discussion was held regarding the overflows, why they occur, what QLDC is proposing to do through the annual and long term plans re improvements to the network, and this resource consent and proposed conditions. No direct concerns were raised with regard to the overflows or the resource consent.

5 Assessment of Environmental Effects

5.1 Philosophy for Assessment of Effects

The philosophy for the following assessment of environmental effects has been formulated to articulate that the management (i.e. avoid, remedy, or mitigate) of adverse effects is achieved through the implementation of the conditions of consent.

Subsequently, the following formulation was adopted for this assessment:



The assessment below provides an assessment of the following effects as a result from overflows from the wastewater network to land and fresh waterbodies:

- Positive Effects;
- Ecological Effects;
- Public Health and Recreation Effects;
- Amenity Effects; and
- Cumulative Effects

5.2 Positive effects

Through this consent process, QLDC's intention is to build on its current plans and practices and to implement a strategy to best manage the actual and potential adverse effects on public health and the environment from wastewater overflows to water bodies.

Positive effects identified from this process include that QLDC will follow a detailed, transparent response process to overflows when they occur to protect human health and will make improvements to the network through annual monitoring and long term planning. The consent will also support improved reporting of overflows and increased communication and visibility between QLDC, the ORC, stakeholders and the community.

Network improvements through annual plans, wastewater strategies and capital works projects, will improve the network and reduce the frequency of overflows over time which is considered to be a positive effect for the community and the receiving environments. Ongoing community education on the operation of the wastewater network will additionally contribute to a reduction in the frequency of overflows.

5.3 Ecological effects

As outlined in section 3, the Queenstown Lakes District is host to a number of receiving freshwater environments. Ecologically, the majority of these waterways have good to excellent water quality and support high valued aquatic ecosystems⁹. In particular, Lakes Wakatipu, Wanaka and Hāwea are microtrophic, characterised by high water clarity and low nutrients and algal biomass. A large volume of this water then forms the Clutha and Kawarau rivers. In comparison, the Shotover river has high sediment loads and Lake Hayes has poor water quality resulting from historical land use practices.

Wastewater overflows have the potential to discharge nutrients, namely nitrogen and phosphorus, and contaminants including metals and chemicals to the environment. Due to the high water quality within the District, these freshwater environments are potentially sensitive to these inputs.

The impacts of a wastewater overflow reaching a freshwater receiving environment has been identified within the Ecology Report (Appendix C). These impacts include a high biochemical oxygen demand as organic matter aerobically breaks down, loss of water clarity from suspended solids, increased phytoplankton biomass and nitrogen toxicity.

The adverse ecological effects arising from the aforementioned impacts include, but are not limited to, increased fungal growth, changes in macroinvertebrate communities, reduced visibility effecting trout and salmon feeding ranges and water toxicity. These adverse effects and their prevalence or severity can be attributed to the specific freshwater receiving environment and nature (volume, duration) of the overflow event.

Lakes

In the case of the large lakes, Wakatipu, Wanaka and Hāwea, the low levels of nutrients mean they are anticipated to be sensitive to wastewater discharges. However, these effects are not expected to adversely affect the overall health of the lakes and will be largely restricted to localised effects in the vicinity of the discharge. Following the notification of an overflow, the response process kicks in to remediate the breakage in the network, stop flow of discharge to the receiving environment, and to contain the area. The 2017/2018 median response times were 22 minutes with a key performance indicator of 60 mins and a median resolution time of 151 minutes with a key performance indicator of 240 minutes. Thus reducing the areas of the lakes subject to the overflow discharge and adverse effects.

Lake Hayes is expected to be less sensitive to an event due to existing high levels of nutrients. However, Lake Hayes has been identified as having limited potential for the dispersion of a wastewater plume compared to the larger lakes.

Streams, small rivers and small-medium rivers

The Ecological Assessment identifies streams, small rivers and small-medium rivers are generally highly sensitive to wastewater discharges during periods of low flows. However, in the case of small-medium rivers such as the Arrow River, Cardrona and Luggate Creek, higher flow periods will result in greater dilution. The adverse effects associated with a wastewater overflow reaching these environments is associated with the potential to feed into downstream tributaries and interrupt trout and kōaro spawning and rearing habitats.

However, given the infrequent discharge events, the values associated with these environments are not expected to be significantly affected.

⁹ Queenstown Lakes District Council Wastewater Network Consent: Assessment of Ecological Effects 16/11/2018 – Ryder Environmental Limited

Large Rivers

The Ecological Assessment states the Hāwea, Shotover, Kawarau and Clutha Rivers contain generally low nutrients although the Shotover can carry high loads of suspended sediment. In addition, these rivers have large flows and thus a greater capacity for dilution meaning they are relatively insensitive to wastewater discharges ecologically. Given the infrequent nature of overflow events, short term discharge and dilution capacity resulting from large river flows, it is considered that the adverse effects on these larger rivers will be less than minor.

Conclusion

The above ecological assessments on the freshwater bodies of the Queenstown Lakes District identifies a range of freshwater receiving environments. The characteristics of these receiving environments assist in evaluating the level potential adverse effects may occur and a need to remedy and mitigate these potential adverse effects. An example of this is localised adverse effects compared to high dilution potential in differing environments. As a result of this, QLDC proposes a raft of consent conditions designed to mitigate the adverse effects. These proposed conditions include physical responses to overflow events in regards to clean up efforts, network improvements designed to reduce frequency over time and ongoing community education. These conditions are outlined in section 7 below.

Consequently, with the implementation of proposed consent conditions, the adverse ecological effects of infrequent, short term wastewater overflows to freshwater environments are considered to be more than minor in localised environments but overall no more than minor.

5.4 Public Health effects

The freshwater environments of the Queenstown Lakes District provide numerous water based and related recreation opportunities. These opportunities encourage the public to interact closely with the district's lakes and rivers resulting in a high probability of primary contact recreation including activities such as swimming and paddling where full immersion is anticipated, and canoeing and paddle boarding where ingestion is unlikely unless the individual capsizes and falls into the water.

In order to understand the relationship between these activities and potential overflow events, NIWA has been engaged to assess the potential adverse public health effects in the event a wastewater discharge reaches these freshwater environments. Its report is attached in Appendix D.

It is important to note that the NIWA assessment has been based on modelling the health risks arising from contact recreation based on several assumptions. These include (but are not restricted to): the nature of contact recreation (swimming, or activities likely to lead to full immersion), the duration of swimming, a typical concentration range of the selected model pathogen based on New Zealand and overseas measurements of untreated wastewater, and use of norovirus as the model pathogens. Currently no data or modelling of dilution, dispersion or advection of discharges exist for freshwater lakes and rivers in the Queenstown Lakes District.

Consequently, a 'reverse' Quantitative Microbial Risk Assessment (QMRA) has been used for this assessment. A reverse QMRA approach was considered appropriate in view of the absence of key data and information required in a conventional QMRA approach.

Using the assumptions listed earlier, the QMRA modelling estimates can only be presented in terms of the Individual Infection or Illness Risks likely to exist, assuming various degrees of dilution of the discharge. As noted earlier, where these risks will prevail (i.e. downstream extent of risk), or the period over which these risks are likely to exist cannot be estimated without access to the output from a calibrated hydrodynamic model (lakes), or estimates of mixing and dilution (streams and rivers). Attempts to overcome the limitations imposed by absence of this information is likely to make the risk assessment overly conservative and alarmist.

In this case, assumptions within the QMRA were considered adequate for the purposes of this consent. Assumptions made in place of absent data was incorporated into a model allowing for 'Monte-Carlo' random sampling.

These assessments summarised the following:

- Risk of illness is always lower than risk of infection – illness requires infection, whereas infection does not necessarily lead to illness;
- Aggregation of pathogens considerably decreases infectivity and risk of illness, especially at low doses;
- Risk of illness or infection decreases as dilution increases

The assessment concluded very infrequent wastewater overflows should be anticipated. The QMRA process indicates a potential for serious health risks arising from discharges. As a result, response plans are recommended to ensure public health is protected and risk to the district's communities are minimised.

In response to the identified potential adverse effects of infection and illness upon contact with an overflow event, QLDC has proposed both physical responses and long term network improvements as conditions of consent.

Physical Responses

QLDC has proposed a framework of physical responses to an overflow event – the flow chart is explained above and contained in Appendix B.

Dr. Neale Hudson also confirmed that a review of the response plan included in this application was undertaken and he concluded that it provides a suitable high-level indication of what would be done in response to an overflow event.

Network Improvements

In addition to immediate physical responses, network improvements over time will assist in minimising the risk of overflowing and resulting primary contact.

These network improvements include increased capital investment, ongoing monitoring and production of annual monitoring reports and the development of a specific wastewater network strategy.

The implementation of the above response plans and longer term network improvements will assist in reducing the likelihood of future overflow events. As a result, in the future the overall public health risk to local communities is considered to be very low¹⁰.

Conclusion

With the implementation of the proposed consent conditions including physical response processes, the public health assessment finds the risk to human health from occasional discharge of wastewater to be low to very low. Consequently, the adverse public health effects are considered to be no more than minor.

5.4.1 Drinking water quality effects

Freshwater resources across the Queenstown Lakes District are generally of alpine origin and thus of high quality. QLDC takes advantage of this resource and has a variety of drinking water takes across the district. As explained above, these takes are both from aquifer groundwater via bores and surface water via intakes from the large lakes Wakatipu and Wanaka. While drinking water takes are treated with chlorine, and some with UV light wastewater overflow events have the potential to introduce adverse effects via infiltration and

¹⁰ Hudson, N. (2019) Aberrant discharges for Queenstown Lakes Council Wastewater Networks, 23

recharge from surface water. Table 3 in section 3.4 outlines the existing community water takes within the district and their general location. As drinking water takes are managed for human consumption per the DWSNZ and constantly monitored, the overall adverse effects are considered to be less than minor. These potential adverse effects on the two forms of water takes are discussed below.

Groundwater takes

The majority of community drinking water takes owned and managed by QLDC are groundwater takes via bores. Takes from bores located near surface waterbodies may also include a contribution of surface water. These takes supply most of the urban areas of the District with the exception of Queenstown and Wanaka. In the event of a wastewater overflow, seepage or recharge from surface water may result in wastewater traces entering aquifers where groundwater takes are located. However, due to the infrequent nature, generally small volumes of discharge and dilution, this is considered to be highly unlikely. Additionally, QLDC is required to take (and has taken) steps to ensure surface water cannot infiltrate these groundwater take locations through physical barriers such as backflow prevention devices, watertight doors and implementation of a new standard to be followed when constructing new community supply bores.

Subsequently, the adverse effects on community groundwater drinking takes are considered to be less than minor.

Surface water takes

The two largest urban areas of the Queenstown Lakes District are Queenstown and Wanaka. Both of these urban areas are supplied drinking water from surface intakes on Lakes Wakatipu and Wanaka respectively. It is noted the surface take locations for both these urban areas are located either adjacent or not far from residential populations. Given these takes are from surface water, their proximity to urban areas and that wastewater overflows can discharge to surface water, there is the potential for adverse effects to be introduced.

Surface takes are treated with chlorine, and in the case of the Kelvin Heights intake also UV disinfection. In the event that an overflow enters the lake in close proximity to a drinking water intake, the intake can be shut down as part of the overflow response.

Consequently, the adverse effects on surface drinking water take are considered to be less than minor.

5.5 Amenity effects

5.5.1 Recreational

The freshwater environments of the Queenstown Lakes District provide numerous recreational opportunities, particularly during the warmer summer months. These opportunities include, but are not limited to, swimming, boating, fishing and paddle boarding and occur across the district's lakes and rivers.

Wastewater overflow events have been identified as primarily occurring from manholes which are generally located at low points in the network such as lake-fronts and rivers. As a result, in the event of an overflow there is the potential for discharge to reach the freshwater environments and adversely effect those recreational values associated with the rivers and lakes of the district.

Given QLDC provides access for many recreational opportunities along freshwater margins in the form of reserves and boat ramps, it is inherent that Council seeks to protect and maintain these areas. This is proposed through the implementation of proposed consent conditions that seek to mitigate of adverse effects associated with a wastewater overflow event. These conditions include a set of physical response protocols articulating remediation efforts during and after an overflow event. These physical responses include collection of solids, vacuuming of affected areas, water quality sampling and public notification.

Consequently, the adverse effects on recreation values of infrequent and short term wastewater discharges to both land and water are considered to be transient and no more than minor.

5.5.2 Odour

In the event of a wastewater overflow to either land or freshwater, the potential for adverse odour effects exist. The greatest risk of adverse odour effects is considered to be those small overflows typically occurring from a manhole. This is due to the fact that pump stations are actively alarmed and monitored and larger overflows will be rapidly identified and remediated. A smaller overflow has the potential to exist for a longer period of time and thus have a greater odour effect.

However, given the remediation protocols proposed within the conditions of consent; when an overflow is identified QLDC contractors are required to clean up all traces of the event. Through this remediation, and use of specialist equipment any adverse odour effects are considered to be short term, localised, infrequent and will not last beyond remediation.

Consequently, the proposed physical response consent conditions will allow for sufficient remediation of the environment and thus the adverse odour effects of an overflow event is considered to be no more than minor.

5.5.3 Visual

Public perception of raw wastewater directly entering a freshwater environment from an overflow is not anticipated to be favourable or acceptable to those that live, work and play in the Queenstown Lakes District. As such, a wastewater overflow event, regardless of location, has the potential to introduce adverse visual effects.

As overflow events cannot be fully avoided, adverse effects must be mitigated and remedied. QLDC has acted upon this through the alarming of pump stations and the implementation of proposed consent conditions. The alarming of pump stations allows QLDC and its contractor, Veolia, to have fore warning of potential overflow events and provides the opportunity to mitigate and remedy a potential event. This is particularly crucial as pump stations are generally located at low points in the network such as lakes and rivers where the public are afforded recreational opportunities and thus without the existing controls there would be a greater chance of seeing an overflow.

Additionally, proposed response protocols call on QLDC's contractor to be onsite as soon as possible following an overflow notification and to take remediation steps to clean up all traces of the overflow, whether that be on land or in freshwater. It is noted this response seeks to keep any discharge as short term as possible and thus keep adverse effects localised. Once the discharge has been remediated there will be no long lasting visual effects.

Consequently, while it is acknowledged the adverse effects cannot be entirely avoided, they are mitigated and remedied to a degree that the effects can be considered more than minor but less than significant.

5.6 Cultural effects

The Queenstown Lakes District Plan does not directly identify sites of significance to mana whenua. However, it is acknowledged that the District, and in particular its waterways, are of much importance to mana whenua. Accordingly, engagement with Ngāi Tahu through Aukaha and Te Ao Mārama representing their associated rūnanga was established early on in the preparation of this application.

This engagement sought to quantify the sites of significance and associated values to mana whenua. Ngāi Tahu are the appropriate people to provide the actual and potential cultural effects. Arising from this engagement and the production of a CIS, cultural effects can be assessed, and potential adverse effects could be avoided, mitigated or remedied.

At point of lodgement, a formal CIS has not been received and thus there is the limited the ability for assessment of cultural effects.

Notwithstanding the above, it is acknowledged that throughout engagement mana whenua indicated their appreciation of the work undertaken thus far and were generally supportive of the management of overflows given they already occur and cannot be fully avoided in the future.

5.7 Cumulative Effects

Ecological and human health assessments have identified the ability to sufficiently mitigate and remedy the adverse effects given overflow events are infrequent, short term and generally small in volume. However, the potential for cumulative adverse effects exists if overflow events increase in frequency and severity or a number of them occur in simultaneous or quick succession. The data that QLDC holds on historic overflows does not reflect these types of events occurring. However, the Network Consent is forward looking and intended to be in place for 35 years.

With existing and planning procedures in place the likelihood of these events occurring transient, very infrequent and the effects very acute and not cumulative. Notwithstanding this, their occurrence cannot be entirely ruled out as a possibility.

As explained above, QLDC has actively identified network improvements to reduce the likelihood of such events occurring in it's 10 Year Plan and expects to spend \$\$816M on service improvements, increased capacity and extensions. Specifically, QLDC plan to spend \$105M between 2018 and 2028 on to the wastewater network including pump stations, pipes and treatment plants.

Additionally, quick intervention and clean up of overflows will assist in reducing the potential for cumulative effects. As part of the response process (Appendix B) an analysis and investigation into each event is required. Similarly, the QLDC under the proposed conditions of consent is required to record each event and therefore repeat overflows in the same part of the network will be investigated further to identify and resolve any underlying issue.

It is anticipated that the 10 Year Plan investment in addition to a large part of the current network being under 21 years old will result in overflows not increasing in frequency or severity. One of the key factors is ongoing community education.

As such, it is anticipated that while the potential for cumulative effects exists, these are not considered to be significant.

6 Statutory and Non Statutory Assessment (Summary)

This section provides a summary of the statutory context under which the Network Consent will be assessed, and a summary of the statutory and non statutory assessment that has been undertaken to support this resource consent application. The full statutory and non statutory assessment is contained in Appendix F.

6.1 Statutory Context Summary

In accordance with Section 15 of the RMA, the QLDC is seeking resource consent to discharge wastewater to freshwater receiving environments and to land in circumstances when it may enter freshwater.

In considering an application authorising a discharge; the consent authority is required to make assessment pursuant to Sections 104 and 105 of the RMA.

6.2 Statutory and Non Statutory Assessment

There are a number of objectives and policies relevant to this discharge application in the national and regional planning documents. A full and comprehensive assessment against these documents is enclosed within Appendix G. A succinct summary of the main conclusions can be found below.

6.3 Statutory Assessment Summary

6.3.1 Resource Management Act 1991 (RMA)

Section 104 and 105 of the RMA sets out the matters a territorial authority must have regard for when considering a discharge application. These matters are subject to Part 2 of the RMA which sets out the purpose (Section 5) and principles (Section 6-8) of the Act.

Part 2 – Purpose and Principles

Section 5 - Purpose

Section 5(1) of the RMA states the purpose of the RMA is *to 'promote the sustainable management of natural and physical resources.*

With regard to sustainable management as defined in section 5(2); the effects caused by the overflow events on the environment and to human health can be remedied and mitigated through response and infrastructure planning actions proposed by QLDC.

Section 6 – Matters of National Importance

Section 6 of the RMA addresses the requirement to *'recognise and provide for'* matters of national importance in achieving the purpose of the Act.

In regards to the specific matters identified in Appendix G; this proposal will be consistent with Section 6. Waterbodies and their associated habitats within the district will be preserved and protected and Māori's relationship with the land addressed through engagement.

Section 7 – Other Matters

Section 7 requires decision makers to have *'particular regard'* to the stated matters in achieving the purpose of the Act. The matters relevant to this proposal are outlined within section 7.2.1, Appendix F.

It is considered that the proposal will be consistent with these matters. Proposed conditions of consent will seek to ensure the maintenance and enhancement of landscape values and Kaitiakitanga is provided for through engagement and the production of a Cultural Impact Statement.

Section 8 – Treaty of Waitangi

Section 8 of the RMA requires those persons exercising functions under the Act to *'take into account'* the principles of Te Tiriti o Waitangi.

Engagement with local iwi has been established with QLDC and the project team relaying its intent to work in collaborative way with Ngāi Tahu. This is reflected in the engagement that has been undertaken pre lodgement of the application. Additionally, a CIS is being prepared. Having taken into account the principles of Te Tiriti o Waitangi, the proposal is considered to be in accordance with Section 8.

Section 104

Section 104(1)(a) – Actual and Potential Effects

Pursuant to Section 104(1)(a) when considering an application for a resource consent, a consent authority must have regard to the actual and potential effects on the environment.

The actual and potential effects identified on the environment as a result of this proposal have been discussed in detail in the above Section 5 – Assessment of Environmental Effects. It is considered that any adverse effects arising from the proposal can be sufficiently mitigated through proposed suite of consent conditions outlined within Section 7. Additionally, the proposal will result in positive effects over time being the more efficient and effective operation of the QLDC wastewater system reducing the likelihood of wastewater overflows occurring.

Section 104(1)(b) – Actual and Potential Effects

National Policy Statement for Freshwater Management

The NPSFM sets out the objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits.

The NPSFM contains 4 objectives and 7 policies on water quality. The objectives are high level, with a focus on outstanding freshwater bodies, significant values of wetlands and water bodies degraded to the point of over-allocation.

The NPSFM contains 5 objectives and 8 policies on water quantity. The objectives relate to safeguarding life supporting capacity; avoiding further, and phasing out existing, over-allocation; improving and maximising efficient allocation and efficient use of water; and protecting significant values of wetlands.

The NPSFM contains 1 objective and 2 policies aimed at improving integrated management of fresh water and land development across whole catchments.

The NPSFM also contains 1 objective and 1 policy to ensure tangata whenua values and interests are identified and reflected in freshwater management.

Appendix F assesses the objectives relevant to this proposal. This assessment concludes the proposal will be consistent with the NPSFM through management of effects to the receiving environment. This is

accomplished through the proposed suite of consent conditions and through involvement and engagement with iwi and hapū.

National Policy Statement for Urban Development Capacity

Queenstown Lakes District has been identified by central government as a high growth district. As such, the Council is currently developing a Future Development Strategy (FDS) to guide urban development.

While this proposal is to authorise existing and future overflows, the National Policy Statement for Urban Development Capacity (NPSUDC) is not considered to be of relevance to this application. This is because the outcomes of the FDS are not yet certain and thus any further future wastewater networks not yet identified are uncertain.

Otago Regional Policy Statement

The Regional Policy Statement (RPS) was made operative on 1 October 1998 and is a framework for the sustainable and integrated management of resources across the Otago Region. It identifies regionally significant issues and sets out objectives and policies that direct how natural and physical resources are to be managed. Being a high level policy framework; the Otago Regional Plan is required to give effect to this RPS.

Otago Regional Council is currently reviewing its RPS. Council notified its proposed RPS on 23 May 2015 and released its decisions on 1 October 2016. Given the majority of this proposed RPS is operative, a dual assessment has been conducted for fullness and clarity within Appendix F.

In summary, it is found that the proposal is generally consistent with, and not contrary to the operative and proposed RPS's.

Otago Regional Plan: Water

The Otago Regional Plan was notified on 28 February 1998 and made operative on 1 January 2004 with various amendments since this date. The purpose of the Otago Regional Plan: Water (ORPW) is to promote the sustainable management of Otago's water resources. This is achieved by giving effect to the RPS through objectives and policies to address use, development and protection of Otago's freshwater resources.

Appendix G sets out a full assessment of the relevant objectives and policies within the plan in regards to the proposal. This assessment finds the proposal is generally consistent with and not contrary to, the ORPW.

Lake Wanaka Preservation Act 1973

The Lake Wanaka Preservation Act 1973 was made operative on 23 November 1973 in recognition of concern over hydro-electric development effects on Lake Wanaka. The purpose of this Act is to preserve the water levels of and maintain and improve the water quality of Lake Wanaka in addition to restricting artificial water movement. This is partially achieved through the establishment of the Guardians of Lake Wanaka which reports to the Minister of Conservation on matters affecting the purpose of the Act.

Through public engagement and proposed conditions, it is considered that the proposal is consistent with the purpose of the Act.

Water Conservation (Kawarau) Order 1997

Pursuant to s214 of the RMA, the purpose of Water Conservation Orders is to provide protection of the characteristics of, and preservation of the natural state of water bodies. The Kawarau Water Conservation Order was publicly notified on 27 June 1991 and made operative on 17 March 1997.

The Kawarau Water Conservation Order specifically preserves water bodies located in Schedule 1 and protects the characteristics of those water bodies in Schedule 2 with the exception of maintenance or protection of network utility operations.

Overall, the way in which wastewater overflows are responded to, as proposed in the suite of consent conditions will provide for both the preservation and protection of the identified water bodies. For this reason it is considered that the application will not be contrary to the purpose of this Order.

Section 105 Summary

In accordance with Section 105(1)(c) of the RMA, alternative methods for the proposed discharges have been assessed.

The only possible “alternative” option would be for QLDC to rebuild the entire wastewater network to the most up to date technology standards. However, this would come at a significant cost to ratepayers and would not eliminate overflows altogether. Any system will be designed and constructed to a certain ‘event’ standard or probability. Additionally, there is no certainty any system can fully account for factors such as blockages and breakages caused through foreign objects. Wastewater overflows in the Queenstown Lakes District unlike other Council areas are not predominantly from wet weather events but from foreign objects entering the system from the public / community.

For the reasons outlined above and explored in further detail in Appendix F; the incremental upgrade of the QLDC network and a suite of consent conditions as proposed is the preferred outcome.

6.4 Non Statutory Assessment

In accordance with Section 104(1)(c), the consent authority may consider any other relevant matters in order to make a determination on the application. Other matters that are considered to be relevant are explored in detail in Appendix F and summarised below.

Iwi Management Plans

Two Iwi Management Plans (IMP) have been identified as relevant to this application, there are;

- Kāi Tahu Ki Otago – Natural Resources Management Plan 2005 and;
- Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008.

As no CIS has yet been received, a full and detailed assessment against these plans has not yet been undertaken.

7 Proposed Draft Conditions

| QLDC condition number | QLDC proposed condition | Reasons why condition proposed / purpose of the condition |
|----------------------------------|---|--|
| Administrative conditions | | |
| 1 | <p>In General Accordance</p> <p>Except as modified by the conditions below, the Wastewater Network Overflow Discharge Consent shall be undertaken in general accordance with the information provided by the Consent Holder, Queenstown Lakes District Council (QLDC), being:</p> <ul style="list-style-type: none"> a) The Assessment of Environmental Effects prepared by Beca Ltd dated 5 April 2019 b) The Physical Response Flow Chart (attached to these conditions as Attachment 1) c) The ecological assessment prepared by Ryder Consultants Ltd d) The public health assessment prepared by NIWA | <p>It is expected that ORC will have a standard “in general accordance with the application material” condition. However, this resource consent is slightly different to typical consents because something that already occurs is being consented, and the conditions are key to the ongoing management of adverse effects. Therefore an “except as modified by the condition below” is requested to be included in this condition as this stipulates that the conditions, where different or advancing something beyond the application documentation, take precedent.</p> |
| 2 | <p>Physical Scope of Network Consent</p> <p>This Network Consent authorises wastewater overflow discharges from the following:</p> <ul style="list-style-type: none"> a) QLDC owned and managed wastewater collection networks (including existing and new manholes, pump stations, engineered overflow points, and pipes): <ul style="list-style-type: none"> – Queenstown including Arthurs Point, Frankton, Shotover Country and Lakes Hayes Estate, Lake Hayes, and Arrowtown; – Wanaka and Albert Town; – Lake Hāwea; – Luggate (part); and – Cardrona township (part). | <p>Describes what is authorised by the resource consent so that the application material does not need to be referred back to and is clear for compliance monitoring purposes for both ORC and QLDC.</p> <p>The assessment of environmental effects undertaken for this application has assessed the receiving environment for all the areas listed, including those areas that are not currently under the ownership and / or management of QLDC. The proposed conditions set out below seek to manage the adverse effects of overflows through physical response procedures that apply no matter the location / waterbody, and through improvements to the wastewater network over time. Ongoing improvements to wastewater systems technology is envisaged to assist in</p> |

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| | <p>b) Wastewater collection network areas which are not currently owned or managed by QLDC, but have the potential to be in the future (including existing and new manholes, pump stations, engineered overflow points, and pipes):</p> <ul style="list-style-type: none"> - Kingston; - Glenorchy; - Cardrona; - Hāwea Flat; - Glendhu Bay; - Luggate; - Jacks Point and Village; - Hanley Farms; - Coneburn (industrial zoned area); and - Millbrook Resort area. <p>Refer to Condition 10 for the timing of when these future areas will be subject to the conditions of this consent.</p> <p>For clarity this Network Consent does not authorise wastewater discharges from wastewater treatment plants.</p> | <p>reducing the likelihood that overflows will occur from new manholes and pump stations.</p> |
| 3 | <p>Access</p> <p>QLDC shall enable that access to relevant parts of the wastewater network is available at all reasonable times to the Otago Regional Council or its agents for the purpose of carrying out inspections, surveys, investigations, tests, measurements and to take samples.</p> | <p>A general condition to allow monitoring and inspections of the network by the consenting authority.</p> |
| 4 | <p>Maintain Records on Overflows</p> <p>QLDC shall maintain a record of wastewater overflows that reach water or have the potential to reach water. This record shall include:</p> <ol style="list-style-type: none"> a) The specific location the overflow occurred b) The approximate start time and end time of the overflow if this is known | <p>To ensure that a robust record of overflows (and relevant information relating to them) is kept by QLDC going forward. This will assist it to meet its reporting obligations to ORC under this consent and will built up a history of overflow data allowing easy identification of where repeat overflows are occurring in the same area of the network.</p> |

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| | <ul style="list-style-type: none"> c) The day and time the overflow was notified to QLDC (and then its operations and maintenance contractors if relevant) d) The time it took from being notified about the overflow to reaching the overflow location e) The approximate flow rate and the total volume of the wastewater discharged if this can be ascertained f) Whether the overflow reached a waterbody or had the potential to reach a waterbody g) What actions were taken to physically clean up the overflow h) Why the overflow occurred if this can be determined i) What actions were taken, if necessary, in terms of maintenance, remedial works or renewal to fix the reason why the overflow occurred j) Whether Otago Regional Council and the Ministry of Health were notified of the overflow and the date that this occurred <p>This record shall be available, on request, to the <i>Regulatory / Consenting Manager</i>, Otago Regional Council.</p> | <p>So that a record of overflows is kept. This will build up a robust history of overflows and will allow for easy identification of where repeat overflows are occurring in the same area of the network.</p> |
| 5 | <p>Lapsing of Consent</p> <p>In accordance with section 125(1) and (1A)(a) of the Resource Management Act this consent shall have no lapsing date as it has been given effect to immediately upon the consent being granted.</p> | <p>This wording proposed within this condition is considered necessary to reflect that the consent is authorising an activity that is already occurring, as opposed to a fully new activity which may not start immediately. Therefore, this condition provides confirmation that the consent has been given effect to at the time it was approved. Theoretically the consent would otherwise not be given effect to until an overflow discharge occurred (which is unknown when this might occur).</p> |
| 6 | <p>Duration of Consent</p> <p>The duration of this consent in accordance with section 123 of the Resource Management Act 1991 shall be 35 years.</p> | <p>See the reasons for this duration set out in section 1.5 of the AEE.</p> |

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| 7 | <p>Review of Consent Conditions</p> <p>The Otago Regional Council, under section 128 of the Resource Management Act, may within 3 months of the Annual Monitoring Report being provided in accordance with condition 10 serve notice on QLDC of its intention to review the conditions of this consent for the purpose of reviewing the effectiveness of these conditions in avoiding, remedying or mitigating any adverse effects on the environment resulting from the wastewater overflows authorised by this consent. The review of conditions shall allow for:</p> <p>a) Deletion or amendment to any condition(s) of this consent to ensure that any adverse effects are appropriately avoided, remedied or mitigated; and / or</p> <p>Addition of new condition(s) as necessary to avoid, remedy or mitigate any unforeseen adverse effects on the environment</p> | <p>QLDC is accepting of a review condition being imposed on this consent, particularly given the given the 35-year consent duration being sought.</p> <p>The timing for review suggested is to line up with the Annual Monitoring Report process.</p> |

Physical Response Conditions

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| 8 | <p>Responding to a Wastewater Overflow covered under this Consent</p> <p>Once QLDC is notified of a wastewater overflow authorised under this consent, it shall respond to the overflow in general accordance with the process set out in the flow chart in Attachment 1 to these conditions.</p> | <p>The flow chart included in Appendix B to the AEE sets out how the overflows are physically responded to in order to manage (avoid, remedy or mitigate) any adverse effects on public health and the environment. This condition ties that response process to this consent, however it is preferred if the words in general accordance are included in the condition wording to reflect that this is a collated summary of the process undertaken. Condition 4 above requires the more detailed recording of what process was undertaken in responding to an overflow and provides that it can be monitored by ORC. Condition 4 requires that the record keeping be available upon request to ORC. Condition 10 also requires that this information be included in</p> |
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| QLDC condition number | QLDC proposed condition | Reasons why condition proposed / purpose of the condition |
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| | | <p>the Annual Monitoring Report to be provided to ORC.</p> <p>It is recommended that the flow chart in Appendix B of the AEE be attached to these conditions as Attachment 1 to remove the need to refer back to the consent application documentation.</p> |

Ongoing Community Awareness

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| <p>9</p> | <p>QLDC shall continue to educate and raise awareness to the community, including visitors to the District, on how the wastewater system should be used.</p> <p>The methods (e.g. media, social media, newsletters, print material, meetings) QLDC may use to educate the community is not restricted under this consent, but the following shall be covered in education content (in no particular order and not all to be covered in every education initiative):</p> <ul style="list-style-type: none"> a) What should go down wastewater pipes – i.e. only water, human waste, toilet paper, and soaps b) The implications of putting other things down the wastewater pipes for domestic and commercial connections (i.e. breakages and blockages potentially resulting in a wastewater overflow into the community environment) c) How construction material/debris should be properly disposed of d) The correct process for obtaining approved connections to the QLDC stormwater and wastewater networks and the importance of engaging appropriately qualified trades people e) What sort of trees to avoid planting in the vicinity of wastewater pipes <p>The education initiatives that QLDC has undertaken each year shall be included in the Annual Monitoring Report provided to ORC in accordance with Condition 10 of this consent.</p> | <p>As the predominant reason for overflows occurring relates to foreign objects being put down the wastewater network, QLDC recognises the importance of continuing its education and raising awareness to the community and visitors to the District. Ongoing and regular education via a number of methods (media including social, Scuttlebutt, targeted meetings/communication with key parts of the community such as eating establishments, hotels, industrial premises, and local construction industry) will assist in reducing the likelihood of overflows occurring over time.</p> <p>That the education is occurring can be monitored by ORC as the condition requires that the Annual Monitoring Report (Condition 10) includes the education initiatives that QLDC has undertaken throughout the previous year.</p> |
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Network Improvements

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| <p>10</p> | <p>Annual Monitoring Report</p> <p>QLDC shall prepare and submit an Annual Monitoring Report to the <i>Regulatory / Consenting Manager</i>, Otago Regional Council by 1 September each year. The report shall cover the previous financial year (1 July to 30 June) and provide, where required below, information for the current financial year.</p> <p>The Annual Monitoring Report shall include the following information (in no particular order):</p> <ol style="list-style-type: none"> The data collected under Condition 4 of this consent A summary (including evidence) of the education initiatives undertaken by QLDC in accordance with Condition 10 of this consent, and what education initiatives are planned for the current financial year What work QLDC has undertaken in the previous financial year to reduce the likelihood of blockages to the wastewater pipes from tree root ingress, and what work it intends to undertake in regard to this matter in the current financial year Confirmation of what wastewater networks are owned and / or managed by QLDC, including whether any of the future networks listed in Condition 2 of this consent are now owned and / or managed by QLDC and therefore are subject to the conditions of this consent for the current financial year Confirmation including evidence that QLDC has implemented a wastewater preventative inspection programme by CCTV or other technology, and how this was implemented in the previous financial year A summary of any wastewater maintenance or remedial works beyond | <p>This condition is intended to provide ORC on an annual basis with the evidence that QLDC is:</p> <ul style="list-style-type: none"> Physically responding to any wastewater overflow in accordance with required procedures Identifying through data collection any areas of the network that have had repeat overflows occurring in the same area of the network and the measures undertaken to fix these problems Carrying out ongoing education and raising awareness with the community including visitors to the District Making investments to improve the wastewater network to reduce the likelihood of overflows occurring over time <p>The 1 September timing for providing the Annual Monitoring Report to Council is to line up with Councils financial year, being 1 July to 30 June, allowing the months of July and August to prepare the report for the previous financial year as well as capturing investment information for the coming financial year. Why 1 September is proposed as opposed to one month later (i.e. 1 August) is that this date lines up with QLDCs financial allocation systems for the coming financial year, whereby it will be confirmed what investments are being made to the wastewater network in the coming year.</p> |
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| | <p>“business as usual operating and maintaining the network” implemented in the previous financial year</p> <p>g) A summary of what wastewater capital investment works were implemented in the previous financial year</p> <p>h) Subsequent to the first Annual Monitoring Report a summary of what wastewater capital investment works were programmed for the previous financial year did not get implemented, the reasons why, and what was implemented instead</p> <p>i) What wastewater capital investment works are programmed to be implemented in the current financial year</p> <p>For clarity the Annual Monitoring Report does not need to include information relating to wastewater treatment plants in the Queenstown Lakes District, unless in relation to capital works investment where it would be helpful as supporting evidence to network improvements.</p> | |

8 Conclusion

QLDC is applying for resource consent from ORC to discharge wastewater overflows from its network to freshwater receiving environments and to land in circumstances when it may enter water. These overflows occur as a result of blockages, breakages, system failures, extreme storm events, and capacity exceedance in the network.

The occurrence of wastewater overflows from the QLDC network across the District is an existing situation.

Subsequently, consent is sought for a **Discretionary activity** pursuant to Rules 12.A Discharge of human sewage, 12.B Discharge of hazardous wastes, and 12.C Other discharges of the Otago Regional Plan: Water.

An assessment against the relevant statutory and non-statutory documents has been undertaken and has found that the proposed management of overflows are not entirely contrary to the objectives and policies of these documents.

The supporting technical assessments identify potential adverse ecological and public health effects. Consequently, an effects philosophy has been developed to manage these potential adverse effects through the implementation of conditions. These conditions require an immediate physical response process and ongoing network improvements including annual reporting to reduce the frequency of overflows occurring.

Therefore, the above assessment of effects has identified that the overall effects are more than minor but less than significant.