Under The Resource Management Act 1991

In the matter of an application for resource consent to discharge wastewater

overflows from Queenstown Lakes District Council's wastewater

network

Statement of Evidence of Andrew Michael Collins

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Statement of Evidence of Andrew Collins

1 Introduction

Qualification and experience

- 1.1 My full name is Andrew Michael Collins. I am General Manager Urban Development for Harrison Grierson Consultants Limited, a multi-disciplinary consulting company with eight offices throughout New Zealand. I have held this position for about 6 months, after my previous position as General Manager Planning (which I held for 14 years) was expanded. I have an overview role for approximately 110 staff, comprising approximately 40 resource management planners, urban designers and landscape architects in our planning division plus approximately 70 civil engineers and CAD designers in our development division. These staff are based across all of our offices. I live in Tauranga but work nationwide.
- 1.2 I have a Bachelor's Degree in Regional Planning (with First Class Honours) from Massey University in Palmerston North, completed in 1987. Since then I have had over 30 years' planning and resource management experience. I have worked as a planner in both the public and private sector, mainly the latter. I am a full member of the New Zealand Planning Institute and also a Member of the Resource Management Law Association of New Zealand.
- 1.3 During my career, I have been involved in a large number of resource consent, designation, and plan making processes relating to both district and regional issues, and as a result have been involved in many local authority and Environment Court hearings. In my current role, I combine internal management functions with planning work for a wide range of clients throughout New Zealand. My planning work is typically of a strategic planning, project management, policy analysis or resource consent-related nature, and is undertaken for numerous local authority, government, utility and private sector clients throughout the country.
- 1.4 Over the last year, I have assisted Queenstown Lakes District Council as consultant planner in Environment Court proceedings relating to Stage 1 of the Queenstown Lakes Proposed District Plan. More specifically, I have provided planning advice on topics relating to strategic direction, visitor economy, urban growth and development and regionally significant infrastructure.

Purpose and scope of evidence

- 1.5 I have been engaged by Queenstown Lakes District Council (**QLDC**) to provide planning advice and evidence in relation to its application for a resource consent in relation to ongoing (occasional and temporary) wastewater network overflows.
- 1.6 I have become involved with this application only recently, taking over as planner in October 2019. This has been due to a change in circumstances for the original consultant planner, Fiona Blight (then Beca), who has become unavailable following her acceptance of a new role within QLDC.

- 1.7 I was not involved in the preparation of the application nor in any of the consultation undertaken with various stakeholders. Prior to accepting this role, I reviewed the application, the Assessment of Environmental Effects (AEE) and the submissions received before determining my own view of the planning merits of the application. Since accepting this role, I have reviewed the Section 42A report and I will be commenting on that throughout my evidence.
- 1.8 I confirm that I am familiar with most, but not all, parts of Queenstown District, having visited the District on numerous occasions over the years, and particularly over the last year, for both work and leisure purposes.
- 1.9 My evidence is set out as follows:

(a)	Reliance in part on ORC s42A report	(section 3)
(b)	Key issues	(section 4)
(c)	Proposed conditions	(section 5)
(d)	Section 104, Resource Management Act 1991	(section 6)
(e)	Effects on the environment	(section 7)
(f)	Relevant planning documents	(section 8)
(g)	Other relevant matters	(section 9)
(h)	Section 105, Resource Management Act	(section 10)
(i)	Section 107, Resource Management Act	(section 11)
(j)	Part 2, Resource Management Act	(section 12)
(k)	Planning evaluation and conclusion	(section 13)

1.10 I respond to submissions within the above framework, mainly by addressing issues raised rather than addressing specific submitters by name. Similarly, I also respond to the matters raised in the Otago Regional Council (ORC) reporting planners' s42A Report as I proceed through the above evidence framework, as opposed to devoting a specific section of my evidence to the s42A report.

Expert Witness Code of Conduct

1.11 I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's Practice Note 2014. I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

2 Executive summary

- 2.1 My evidence sets out an analysis of key issues to be evaluated in consideration of this application. These are summarised in the following questions:
 - (1) Would consent be a license to pollute or would it provide an appropriate management response? (I conclude the latter)
 - (2) Does discretionary activity status necessitate this application? (I conclude ves)
 - (3) Is there a particular problem with wastewater network overflows in Queenstown District? (I conclude no)
 - (4) Would granting consent lead to any increase in overflows and adverse environmental effects or, if the same question is asked another way, would

- declining consent lead to any fewer overflows and adverse environmental effects? (I conclude no)
- (5) Are there any benefits over and above what QLDC should be doing anyway - that the granting of this consent subject to conditions can achieve, that declining the consent wouldn't achieve? (I conclude yes)
- 2.2 My evidence sets out a comprehensive analysis of recommended conditions and addresses each one in turn, and in some detail. It explains how the conditions have been considerably amended and strengthened to address the concerns raised in submissions and in the ORC's s42A report.
- 2.3 The statutory assessment part of my evidence considers the requirements of relevant sections of the Resource Management Act (RMA), including s104 (environmental effects, relevant planning provisions, other matters), s105, s107 and ss 5 to 8 (Part 2).
- 2.4 The relevant planning documents I considered are:
 - The Regional Plan: Water for Otago;
 - The Regional Policy Statement and Proposed Regional Policy Statement;
 - The National Policy Statement for Freshwater Management;
 - The National Policy Statement for Urban Development Capacity 2016;
 - The National Environmental Standard for Sources of Human Drinking Water.
- 2.5 The other matters I considered are:
 - Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 – The Cry of the People, Te Tangi a Tauira;
 - The Kāi Tahu ki Otago Natural Resource Management Plan 2005;
 - Water Conservation (Kawarau) Order 1997;
 - Lake Wanaka Preservation Act 1973.
- 2.6 My evidence collates the many initiatives that QLDC has put in place, and the investments that it has made (and also those that it has planned and committed to make in coming years) into a lengthy list for ease of reference, drawing upon the evidence of all QLDC witnesses. These are all endeavours to reduce overflows and achieve desired environmental outcomes as much as it can.
- 2.7 My evidence concludes that the proposed conditions, as recently amended and attached in **Attachment 1** (track change version) and **Attachment 2** (clean version) will ensure good response protocols, incident notification, investigations, reporting, reviews and associated preventative and remedial actions. I conclude that the application, constrained and managed by these robust conditions, is consistent with the matters in ss 6 to 8 of the RMA and will achieve the purpose as set out in s5 of the RMA.
- 2.8 I conclude that the application is able to be granted (subject to the recommended conditions) as it:
 - Will enable better environmental outcomes than if consent is declined (noting that overflows will inevitably still arise if consent is declined);
 - Is appropriate having regard to all the considerations in ss 104, 105 and 107 of the RMA;
 - Is consistent with the purpose and principles of the RMA as set out in ss 5 to 8 of the Act.

3 Reliance in part on ORC s42A report

- 3.1 I am mindful that the ORC planners have produced a comprehensive "Section 42A" report that describes:
 - The proposal;¹
 - The activity status for the application;² and
 - Overview of submissions received.³
- 3.2 In order that my planning evidence may avoid too much duplication, and with a view to moving more quickly towards the evaluation of the key issues, I adopt the s42A report in the above respects. It is common ground, for example, that the activity status for the consent sought is *discretionary* for the reasons set out in the s42A report.
- 3.3 The ORC's s42A report also sets out comprehensive comments on:
 - Adverse environmental effects (s104(1)(a));⁴
 - Relevant planning documents (s104(1)(b);⁵
 - Other matters (s104(1)(c).⁶
- 3.4 I find myself generally in agreement with the descriptive and factual components of these sections of the s42A report (i.e. the identification of relevant planning documents and, within these, the relevant objectives and policies) but my evaluation and conclusions frequently differ for reasons that I set out in my evidence.

4 Key issues

- 4.1 I consider that the main issues for the Hearing Commissioners to address, or questions to ponder, at the hearing are as follows:
 - (1) Would consent be a "license to pollute" or an appropriate response to manage and reduce the effects of existing largely inevitable overflows?
 - (2) If a rule in a regional plan requires a resource consent for an activity such as a discharge to land or water by virtue of such discharges being a discretionary activity (as in this case) and if such discharges do in fact occur (as they do, and will continue to do, in this case), then would it not have been improper and contrary to the plan and the Resource Management Act for QLDC *not* to have applied for this resource consent?
 - (3) Does Queenstown Lakes have a particular problem with wastewater network overflows relative to other wastewater networks around the region and around New Zealand? An answer of "no" would not, in itself, justify the granting of consent but I consider the question should be asked as it provides context for the other issues.

Section 4 of ORC report (pages 3-6).

Section 5 of ORC report (page 7)

³ Section 6 of ORC report (pages 7-9)

Section 8 of ORC report (pages 13-22)

Sections 9.1.3 to 9.1.8 of ORC report (pages 23-33)

Sections 9.1.3 to 9.1.8 of ORC report (pages 23-33)

- (4) Would granting consent lead to any *increase* in overflows and adverse environmental effects or, if the same question is asked another way, would declining consent lead to any *fewer* overflows and adverse environmental effects? Which of these consent outcomes leads to the greater chance of the latter (improved) environmental outcomes?
- (5) Given that QLDC has the ability (and I would say, obligation) to undertake a wide range of initiatives and investments to improve wastewater network performance and reduce overflows *irrespective* of whether this consent is granted or declined, then are there any additional benefits that the granting of this consent subject to conditions can achieve, that declining the consent wouldn't achieve?
- 4.2 I will briefly discuss each of these in turn.

(1) License to pollute or appropriate management response?

- 4.3 We can likely all agree that the concept of untreated wastewater reaching freshwater is offensive and its occurrence should be avoided to the greatest extent practicable. This is the case anywhere of course, but particularly in a location such as the Queenstown Lakes District with its outstanding lakes and rivers, very high water quality, iconic scenery and with it being New Zealand's premier visitor destination.
- 4.4 The wastewater network is fundamental infrastructure that serves vitally important public health and environmental outcomes, and it is the subject of substantial operational expenditure (for operations and maintenance activities) as well as substantial and increasing capital expenditure (for network improvements and extensions, upgrades and renewals). ⁷ The issue, though, is that the wastewater network and this applies to any wastewater network, anywhere is not infallible despite best practice design and construction and certainly despite best intent. I rely on the evidence of Mr Glasner and Mr Baker to support this view.
- 4.5 The ORC Planners take the view that the application is contrary to a large number of objectives and policies in a wide range of planning documents from their top to the bottom hierarchy. I would agree if the application was directly or indirectly causing new overflows, or prolonging existing overflows, or otherwise enabling overflows that could be practicably avoided. However, from the evidence of Messrs Hansby, Glasner, Baker and Ms Moogan, it is clear to me that this is not the situation.
- 4.6 It is my opinion that the consent being sought is an appropriate response to manage, and reduce the environmental effects of, overflow events (largely outside QLDC's control) that, unfortunately and inevitably, do happen and will continue to happen whether or not consent is granted.
- 4.7 That said, I would not be supportive of a consent being granted that authorises any and all overflow types and which, in doing so, effectively removes ORC's ability to undertake enforcement action in appropriate cases. Several submitters have expressed similar reservations about the draft consent conditions (as set out in the AEE) and I agree with them in this regard.

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Refer evidence of Mr Hansby and Mr Baker.

4.8 My proposed solution is to include two new conditions, being Condition 9 (visual and ecological assessment) and Condition 11 (unauthorised discharges). These are set out in **Attachment 1** to my evidence and I will return in section 5 to discuss these conditions in more detail. By way of brief explanation now, Condition 11 set outs the circumstances when overflows would *not* be authorised by this consent such as, firstly, any overflow that arises as a result of inadequate network capacity , under-investment, lack of maintenance or inadequate response procedures and, secondly, any overflow that can be regarded as more than temporary and which creates effects that s107 of the Resource Management Act intends to restrict (as assessed by ecological survey and report).

(2) Does discretionary activity status necessitate this application?

4.9 As noted in paragraph 3.2 above, it is common ground between the ORC Planners and the applicant that the discharges are a discretionary activity under the Otago Regional Plan: Water for Otago. In my opinion, if the occasional overflow/discharge is largely unavoidable (as set out in the evidence of Messrs Hansby, Glasner and Baker) and if they do occur and will continue to occur, then they need consent. I note that Mr Hansby also makes this point in his evidence. The alternative of not applying for consent feels to me rather like a "head in the sand" approach. I consider that QLDC has taken the proper approach in seeking this consent.

(3) Is there a particular problem with wastewater network overflows here?

- As I said in paragraph 4.3 above, any discharge of untreated wastewater to 4.10 freshwater is accepted in New Zealand to be offensive and should be avoided to the greatest extent practicable. So, the question follows as to whether QLDC is doing all it reasonably can to avoid overflows and, where it can't completely avoid them, to reduce them over time? This is addressed in the evidence of Messrs Hansby, Baker and Glasner and Ms Moogan. While there is always more that can be done, I note from Mr Baker's evidence that QLDC's dry weather overflows in 2017/18 (expressed as events per 1000 wastewater properties) are "normal" – or around the "middle of the pack" - when compared to other territorial local authorities. I note from Mr Glasner's evidence¹⁰ that, unlike many wastewater networks elsewhere, QLDC does not have a wet weather overflow problem as the network has comparatively low levels of stormwater inflows and groundwater infiltration. When all overflow events are taken together therefore (i.e. dry weather overflow events and wet weather overflow events), the evidence suggests that the QLDC wastewater network is, at the least, better than average. QLDC is always striving to further reduce discharges, and clearly this is *not* a situation where consent is being sought for a poorly performing network.
 - (4) Would granting consent lead to any increase in overflows and adverse environmental effects or, conversely, would declining consent lead to any fewer overflows and adverse environmental effects?
- 4.11 This is the same question, asked two different ways. Drawing on the evidence of the QLDC witnesses, I consider that the answer is clearly "no". In either case,

⁸ Refer paragraph 9.5 in Mr Hansby's evidence.

⁹ Refer paragraph 4.4 in the Mr Baker's evidence.

Refer paragraph 5.24 of Mr Glasner's evidence.

QLDC will continue to strive to reduce overflows to the extent it practicably can. If consent is declined, then unfortunately but inevitably, overflow events beyond QLDC control will still occur. For reasons that I will come to later in this evidence - primarily being the additional rigour, independent review and consent authority oversight that can be imposed by conditions – I consider that granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes.

- (5) Are there any benefits over and above what QLDC should be doing anyway that the granting of this consent subject to conditions can achieve, that declining the consent wouldn't achieve?
- 4.12 It could be argued, as the ORC Planners have done, that QLDC does not need to be granted consent in order to do a whole suite of things to improve its wastewater network and reduce overflows (things such as investments, education campaigns, monitoring, contractual obligations and improvements). I agree with this. The statements of evidence of Messrs Hansby, Glasner and Baker and Ms Moogan, point to a large number of initiatives that QLDC has put in place, and investments that it has made, in an endeavour to reduce overflows and achieve desired environmental outcomes as much as it can. Some of these initiatives and investments that come to mind, from their evidence, include:

Regulation and education

- Trade Waste Bylaw 2014;¹¹
- Appointment of Trade waste and compliance officer in May 2016;¹²
- Trade Waste registration system being established in 2019;¹³
- Education campaigns within hospitality sector.¹⁴

Preventative maintenance

- Districtwide maintenance contracts;¹⁵
- Innovative contract requirements and KPI's;¹⁶
- Acoustic monitoring technique pioneered;¹⁷
- Water jet cleaning¹⁸;
- Closed circuit television (CCTV) programmes;¹⁹
- Proactive cleaning of stormwater mud tanks and catchpits to maximise chances of halting any wastewater overflows that may enter the stormwater system;²⁰
- SCADA and sensors on pumps and wet wells that trigger alarms (and automatic pager to contractors) if any issues.²¹

¹¹ Refer paragraph 5.14 of Mr Glasner's evidence.

¹² Ibid.

¹³ Ibid.

Refer paragraphs 8.8 and 8.9 of Mr Hansby's evidence.

Refer paragraphs 3.5 to 3.11 Ms Moogan's evidence.

¹⁶ Ibid.

¹⁷ Refer paragraph 4.1(a) of Ms Moogan's evidence.

¹⁸ Refer paragraph 4.1(b) of Ms Moogan's evidence.

¹⁹ Refer paragraph 4.1(c) of Ms Moogan's evidence.

Refer paragraph 8.5 of Mr Hansby's evidence.

Refer paragraph 8.6 of Mr Hansby's evidence.

Reactive maintenance

 Contractual target response times (60 mins) and target resolution times (240 mins).²²

Planning and investment

- Ten Year Plan (2018-2028) commitments to spend \$105 million on wastewater network improvements;²³
- Infrastructure Asset Management Strategy 2018-2048; ²⁴
- Negotiations with central government to pioneer innovative approach to infrastructure funding via a local visitor levy;²⁵
- Continual improvements in Asset Management Planning, as verified by independent audits;²⁶
- Network master plans for all QLDC owned and operated wastewater schemes;²⁷
- Significant investments in network planning tools, including hydraulic models and detailed flow surveys;²⁸
- Project Shotover in Queenstown (Stages 1 and 2 completed in 2016 and 2019, Stage 3 pending);
- Project Pure in Wanaka, including planning to connect Luggate and Hawea;³⁰
- Planning/funding for new interceptor and Recreation Ground pump station (Gorge Road) to intercept wastewater and remove significant volumes from the CBD network close to Queenstown Bay;³¹.
- Similar new pump stations and interceptor mains planned to capture wastewater flows from North Wanaka and convey it to the WWTP before the wastewater gets close to the lake.³²

Future networks

- Maintenance contractor uses CCTV to check condition of all new network reticulation before it is accepted and vested in Council;
- All new pump stations to be designed with emergency storage.
- 4.13 So, with evidence of all these initiatives and investments that are happening anyway in an effort to reduce overflows and improve environmental performance of the wastewater network (i.e happening regardless of whether this consent is granted or not), I now return to the question posed in Issue (5) above. That is, is whether there are additional benefits that the granting of this consent subject to conditions can achieve, that declining the consent wouldn't achieve? In my opinion, the answer is "yes" and I turn to that shortly in section

Refer paragraph 7.2(b) of Ms Moogan's evidence.

Refer paragraph 6.8 in Mr Hansby's evidence.

Refer paragraphs 5.1 to 5.4 of Mr Hansby's evidence.

Refer paragraph 6.7 of Mr Hansby's evidence.

Refer paragraph 4.1 of Mr Baker's evidence.

Refer paragraph 4.8-4.13 of Mr Baker's evidence.

Refer paragraphs 4.18 to 4.21 of Mr Baker's evidence.

Refer paragraphs 6.9 and 6.10 of Mr Hansby's evidence.

Refer paragraph 6.11 of Mr Hansby's evidence.

Refer paragraphs 6.13 and 10.2 of Mr Hansby's evidence.

Refer paragraph 5.3 of Mr Baker's evidence.

5, with reference to recommended conditions that are set out in **Attachment 1** to my evidence. In particular, I consider that the following are all additional safeguards and benefits that the granting of consent will achieve, but that will not be available to ORC, and the wider community, should consent be declined:

- The ability for ORC to have input into, and certify, the Wastewater Overflow Response Procedure (refer condition 8)
- The requirement for visual and ecological assessment and reporting in relation to overflow incidents that reach a waterbody (refer condition 9)
- The requirement for QLDC to provide ORC with comprehensive annual monitoring reports, including the opportunity for ORC to review QLDC's Education Communications Plans and maintenance and capital investment plans related to the wastewater network (refer condition 15)
- The ability for ORC to require independent review reports every five years
 to assess the adequacy of QLDC's design, operation and preventative
 maintenance procedures and the availability and potential application of
 new technology to achieve further improvements (refer condition 16); and
- The ability for ORC to initiate a review of any or all of the conditions of consent following each Annual Monitoring Report should it be necessary (refer condition 7)

5 Proposed conditions

- 5.1 I now discuss the recommended conditions that are set out in **Attachment 1**. I am intentionally discussing these before turning to the s104 RMA assessments of environmental effects and relevant planning documents as my conclusions regarding these matters rely substantially on the proposed conditions.
- 5.2 It may be helpful for the Hearing Commissioners to have Appendix 3 of the ORC's s42A report close at hand when considering my **Attachment 1**. That is because Appendix 3 of the s42A report helpfully tracks the refinements of the draft conditions from the AEE version, as lodged, through to the applicant's refinements up until 24 September 2019 (generally made in response to consultation feedback) and then the ORC's response to each draft condition.
- 5.3 The conditions in my **Attachment 1** are a progression on the Appendix 3 version in the s42A report in that the base text (black font), is effectively the applicant's position on about 9 October, just after receiving and considering the s42A report. As such, it includes the ORC's suggested wording for several of the conditions where there is agreement. From my perspective, the black font is "base text". Since then, as I have reflected on issues raised in submissions and have prepared this evidence, I have recommended a number of additions and changes, which I show in track change format.

Condition 1 (In general accordance)

5.4 This condition may not need too much explanation as it is typical of many consents. It authorises activities (in this case overflow discharges) by reference to the application documents and to subsequent updates provided in response

to further information requests. It includes a proviso that the conditions of consent will prevail in the event of any conflict with the application documents.

Condition 2 (Physical scope of network consent)

- 5.5 I consider it appropriate for the consent, if granted, to cover both current and future wastewater networks owned and/or operated by QLDC, as networks are being regularly extended and vested in Council, noting that Queenstown Lakes is a district experiencing rapid urban growth. There is a later condition (Condition 14) that sets out the design and construction standards that have to be achieved before any new or extended wastewater network assets are vested in Council. With these safeguards, it can be expected that new infrastructure will perform well and I can see no reason why the consent, if granted, would exclude such networks as unforeseen blockages caused by third parties can occur anywhere in the system. In fact, newly developed areas may experience considerably more building activity than many established areas, with associated risks of occasional construction damage or blockages from building debris. Furthermore, there would be benefits in having the entire QLDC network (as it exists at any point in time through the duration of the consent) to be subject to the suite of conditions proposed.
- 5.6 By contrast, the condition recommended by the ORC Planners would leave new parts outside of the existing network beyond the scope of the resource consent and therefore any occasional wastewater discharges unauthorised. For the reasons I have discussed at paragraphs 4.3 to 4.13 I consider it most appropriate for these areas to also be brought within the supervision that this resource consent will provide.

Condition 3 (Access)

5.7 This recommended condition is described as "reasonable and appropriate" in the s42A report (Appendix 3) and I agree with that assessment.

Condition 4 (Maintain Records on Overflows)

This recommended condition sets out the content of records that will need to be kept in relation to each overflow. The comments in the s42A report (Appendix 3) seek more precise details of overflows (start, finish, volume etc) and, with respect, they indicate a degree of misunderstanding about the nature of the overflows that the applicant seeks to authorise. The overflows may arise in response to obstructions and breakages that are outside the control of QLDC, namely fats, oil and grease (FOG) or foreign objects (personal items and building materials), tree roots or pipe damage, such as from external contractor activities, as set out in Mr Glasner's evidence. Often the precise time that an overflow has started cannot be determined. Nevertheless, clauses (a) to (I) require the collection of relevant useful data. I recommend the addition of new clause (k) as a record of maintenance history in the incident location could be very useful to have.

Condition 5 (Lapsing of consent)

5.9 This recommended condition uses wording suggested by ORC Planners in the s42A report (Appendix 3). The ORC Planners state that *"the intent of the*

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Refer paragraphs 5.2 to 5.10 of Mr Glasner's evidence.

condition is to ensure that the consent does not lapse should a discharge not occur within the first five years". I have retained it for the time being but, as the records show several network overflows every year, I unfortunately do not anticipate that lapsing will be a real issue. I expect the consent to be given effect within its first year. I would not regard it as an issue if there were no lapsing condition at all and the default provisions of s125 of the RMA applied.

Condition 6 (Duration of consent)

- 5.10 Many submitters have queried the 35 year consent term sought by Council which is the maximum available under the RMA. I understand that the intent of this was to align with the 30 year horizon for Council's Infrastructure Strategy and to reflect Council's considerable investment in seeking this consent, and also the proposed review conditions.
- 5.11 Policy 7.C.4 of the Regional Plan states:
 - (1) Policy 7.C.4: The duration of any new resource consent for an existing discharge of contaminants will take account of the anticipated adverse effects of the discharge on any natural and human use value supported by an affected water body, and:
 - (a) Will be up to 35 years where the discharge will meet the water quality standard required to support that value for the duration of the resource consent;
 - (b) Will be no more than 15 years where the discharge does not meet the water quality standard required to support that value but will progressively meet that standard within the duration of the resource consent;
 - (c) Will be no more than 5 years where the discharge does not meet the water quality standard required to support that value; and
 - (d) No resource consent, subsequent to one issued under (c), will be issued if the discharge still does not meet the water quality standard required to support that value.
- 5.12 The s42A report usefully sets out³⁴ some considerations relevant to consent durations that the reporting planners have distilled from case law and I agree with that summary. I am of the opinion that a 35 year consent duration is too long in the circumstances. Policy 7.C.4 above would suggest that that a consent duration of "no more than 15 years" would be appropriate and I accept that the Hearing Commissioners should be guided by that.
- 5.13 That said, I tend to think that this policy is intended for more full time discharges to water which is why clause (b) is expressed as it is (ie. progressing towards meeting water quality standards, such as through staged upgrades and the like). In contrast, I note Dr Olsen's conclusion regarding the occasional, temporary overflows that are the subject of this application³⁵:

It is unlikely that short-term, unplanned discharges will contribute meaningfully towards the risk of long-term eutrophication of these ecosystems, given their likely infrequency and the mitigation measures proposed in the application.

5.14 For this reason, in Condition 6, I recommend a 20 year term of consent. I consider this to be appropriate due to the annual monitoring, independent

Refer section 9.6 of ORC report (page 40).

Refer paragraph 14.6 of Dr Olsen's evidence.

review, and review of consent conditions proposed (Conditions 15, 16 and 7 respectively). It also would align well with two Ten Year Plan periods for QLDC.

Condition 7 (Review of consent conditions)

- 5.15 This is a key condition in that it will enable ORC to initiate a review of any or all of the conditions of consent following each Annual Monitoring Report. I have recommended an amendment to clause (b) so that the review can be initiated following receipt of the report and recommendations of any independent review in accordance with Condition 16 (also a new recommendation, that I will come to below).
- 5.16 The s42A report (Appendix 3) suggests alternative wording which I have considered but do not agree with so have not put forward as my recommendation. The s42A report suggests adding a purpose for "ensuring the conditions of consent are consistent with National Environmental Standards, Regulations and/or relevant plans". In my opinion, the nature of the unacceptable but largely inevitable occasional temporary overflow discharges that are the subject of this application is such that it is difficult to see how any future changes to national environmental standards will make a difference to conditions. Unlike the ORC version, I consider that the review condition should be linked to the Annual Monitoring Reports. An annual review opportunity is proposed and I consider that the purpose is best expressed as reviewing the effectiveness of these conditions in avoiding, remedying or mitigating any adverse effects on the environment. This is broad enough to give wide scope and discretion to ORC if needed.

Condition 8 (Wastewater overflow response procedure)

5.17 This condition sets out the requirements for the consent holder to prepare and implement a wastewater overflow response procedure, a draft of which is attached to the evidence of Ms Moogan. It can be seen that I have recommended a number of changes to this condition, so as to clarify incident notification and incident reporting requirements, and to incorporate new visual and ecological assessment steps (as discussed next in relation to condition 9), and to enable ORC to certify the content of the Response Procedure as meeting the condition prior to its issue to the Contractor. I consider that these changes make the condition more robust and effective than it was previously. I note the ORC Planners comment about clause (f), and their suggested wording, but I have retained the wording as it was because I consider that new Condition 9 (discussed next) sets out additional steps requiring investigations for overflows that reach water.

Condition 9 (Visual and ecological assessment)

5.18 This new visual and ecological assessment recommendation has been developed in conjunction with Dr Olsen. We jointly identified the need for a condition such as this to ensure that proper environmental assessments are undertaken where any overflow reaches water and where specified visual indicators are present. Then, Dr Olsen provided the wording to ensure that it is appropriate from an ecological perspective. I consider that this condition will, over the duration of this consent, if granted, enable good data to be built up about the effects of temporary wastewater overflows to remedy a criticism that has been levelled at the current application.

Condition 10 (Notification of wastewater overflows and Incident Reports)

5.19 An earlier version of this recommended condition is described as "reasonable and appropriate" in the s42A report (Appendix 3) and I agree with that assessment. Since then, the draft condition has been improved further, in my opinion, firstly through consultation with Kai Tahu and incorporation of their suggested improvements and then by subsequent edits to achieve consistent and simultaneous reporting requirements to ORC, Ministry of Health and Kai Tahu. I understand that through consultation with Aukaha and Te Ao Marama Incorporated it was proposed to include contact details for them in this condition. On further reflection, I prefer not to include specific phone numbers and email addresses in a consent condition (details which may change) and so I have suggested an amendment to Condition 8(b) instead to ensure that these contact details are recorded in the Wastewater Overflow Response Procedure.

Condition 11 (Unauthorised discharges)

- 5.20 I introduced this proposed new condition earlier, in paragraph 4.8 of this evidence. The background is that when I first considered the draft conditions in the AEE, and the iterations that were developed through consultation and included in the s42A report, it seemed to me that regardless of the cause of any overflow and the size, volume and extent of resultant effects, the consent holder could have satisfied the (then) draft conditions simply by responding and reporting and undertaking network improvements and monitoring as per the conditions. It would have been difficult to identify a breach of conditions even if an overflow was very large or if it was shown to be the fault of QLDC rather than the result of a blockage caused by unknown third parties or by tree roots or similar.
- 5.21 I am not supportive of a consent being granted that authorises any and all overflow types and which, in so doing, effectively removes ORC's ability to undertake enforcement action in appropriate cases. So, I drafted this condition that aims to set out the circumstances when overflows would *not* be authorised by this consent such as, firstly, any overflow that arises as a result of inadequate network capacity, under-investment, lack of maintenance or inadequate response procedures and, secondly, any overflow that can be regarded as more than temporary and which creates effects that s107 of the Resource Management Act intends to restrict (as assessed by ecological survey and report).
- 5.22 This condition will enable QLDC to be held accountable for overflows to water that are a result of its own actions or inactions as well as for those overflows of a scale (regardless of cause) that cause significant effects.

Condition 12 (Ongoing community awareness)

- 5.23 This recommended condition is described as "reasonable and appropriate" in the s42A report (Appendix 3) ³⁶ and I agree with that assessment.
- 5.24 Given that the underlying premise for this consent application is that overflows are unfortunately, but inevitably, arising from blockages, intrusions and breakages caused by third party actions (fats, oil, grease, foreign objects,

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Noting that this condition has been renumbered from Condition 10 in the section 42A report to Condition 12 in Attachment 1 (due to additional conditions added).

- building debris, tree roots, construction damage etc), this condition is an important one in an endeavour to reduce such occurrences.
- 5.25 The condition requires that an Education Communications Plan be prepared to educate and raise awareness throughout the community, including residents, the construction industry, food industry, and visitors to the District, on how the wastewater system should be used. The condition prescribes some core content for the Plan and that it be updated annually.
- 5.26 The ORC s42A report includes the comment that the Education Communications Plan should be a stand alone document rather than forming part of the Annual Monitoring Report. I have recommended amendments to both Conditions 12 and 15 to reflect that.

Condition 13 (Network improvements)

- 5.27 The evidence of Messrs Hansby, Glasner, Baker and Ms Moogan all set out the wide range of initiatives, investments and commitments made, or planned, by QLDC and they explain the comprehensive spatial planning, infrastructure strategy, asset management planning and network modelling tools used.
- 5.28 Mr Hansby discusses the importance of QLDC investing in the resilience of the wastewater network (including capital projects to divert wastewater from sensitive receiving environments) for important human health and environmental reasons.³⁷ He also discusses the need to balance those important resilience investments with the investments needed to improve the existing network and make it more "spill proof" (by which I believe he is referring to upgrades and replacements to existing manholes, pump stations and emergency storage, and similar).
- 5.29 The purpose of this condition is to require a review of QLDC's current wastewater network for the purpose of identifying where measures to prevent or minimise overflows reaching water could be practicably implemented. It specifies some preventative measures and minimisation measures that should be specifically considered (including new or increased storage capacity; standby generators at pump stations, CCTV programmes, alarms, diversion flow paths and similar). The condition requires a report to ORC on all this within 12 months of the date of the consent.
- 5.30 In summary, I consider this condition to be important to ensure that practical preventative and risk mitigation measures are identified and (bearing in mind that these are not exactly glamour projects or even visible projects) that they receive appropriate investment. The ORC section 42A report (Appendix 3) expresses the view that the review should be undertaken by an independent party. I disagree, in relation to this condition, as I consider that QLDC's staff have the best knowledge of the network. However I agree with the concept of providing an opportunity for ORC to request a thorough independent review and I have recommended a new condition accordingly (Condition 16 that I will come to shortly).

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Refer to paragraph 9.10 and 9.11 of Mr Hansby's evidence.

Condition 14 (Future wastewater networks)

- 5.31 Earlier, in paragraph 5.5 when I discussed Condition 2, I referred to this Condition 14. This condition serves to provide further support as to why consent should be granted for not just the current wastewater networks owned and/or operated by QLDC but also the future wastewater networks that it will inherit (by way of the vesting process) as the district grows during the consent term.
- 5.32 This condition sets out the design and construction standards that have to be achieved before any new or extended wastewater network assets are vested in Council. With these safeguards, it can be expected that new infrastructure will perform well and I can see no reason why the consent, if granted, would exclude such networks as unforeseen blockages caused by third parties can occur anywhere in the system, including in new systems.
- 5.33 The s42A report (Appendix 3) expresses the view that this condition is reasonable and appropriate but notes that it is uncertain in places where the Consent Holder has to decide what is practicable and what is not. My view is that the condition is reasonable and appropriate with only minor refinements suggested in **Attachment 1**. The ORC reporting planners' comment that "all new infrastructure should be constructed away from lakes and rivers" is not practical in my opinion. My understanding of the evidence of Mr Glasner is that QLDC will continue to enable and encourage the use of gravity systems, which will entail collection at low points, but that through both design (careful sizing with regard to expected growth, improved provision of emergency storage, better designed flow paths, and other mitigation measures) and through enforced compliance with the relevant NZ Standards and the QLDC Subdivision Code of Practice, good outcomes and performance from future networks can be expected.

Condition 15 (Annual monitoring report)

- 5.34 This recommended condition is described as "reasonable and appropriate" in the s42A report (Appendix 3) ³⁸ and I agree with that assessment.
- 5.35 This requires QLDC to report to ORC annually by 1 September (for the prior financial year ended 30 June) about:
 - Overflow incidents (in accordance with Condition 4);
 - Education initiatives undertaken (in accordance with Condition 12);
 - Works undertaken (and those proposed in the next financial year) to minimise risks of overflows from blockages and tree root ingress;
 - The current extent of the QLDC owned/operated network (noting any additions);
 - Preventative inspection programme activities undertaken;
 - Wastewater maintenance and remedial works undertaken, including identification of any locations with repeated issues; and
 - Capital expenditure projects undertaken (and those proposed in the next financial year) and also an explanation of any scheduled capital expenditure on the wastewater network that was not undertaken.

Noting that this condition has been renumbered from Condition 13 in the section 42A report to Condition 15 in Attachment 1 (due to additional conditions added).

I have recommended two changes to the previous draft of this condition. The first is to amend clause (a) to require comparison between the subject year's data on overflow incidents and the corresponding data from previous years so as to identify trends. This change should assist ORC when deciding if it wishes at any stage to initiate the review condition (condition 7) or the independent review condition (condition 16). The second change is to enable the Education Communications Plan to be a separate document as recommended by ORC reporting planners.

Condition 16 (Independent review)

5.37 Lastly, I have recommended this new condition as I consider that it provides ORC with yet another "lever that it can pull" if it needs or wants to in relation to the exercise of this consent. From the evidence of QLDC's witnesses, I do have confidence that QLDC is really striving to reduce overflows to the maximum extent possible. This is not to say, however, that an independent and appropriately qualified and experienced person could not add value by bringing new ideas from time to time. For example, it is important to keep up with new wastewater network technology and to assess its feasibility for application in the local context. A "fresh pair of eyes" may also identify potential learning opportunities and system or process improvements worth considering.

Concluding comment on the suite of conditions proposed

5.38 To draw this section of my evidence to a close, I am of the opinion that the conditions now proposed will be effective and that they will address many of the issues and concerns expressed by submitters and by the ORC Planners. I consider that in the context of this situation, the granting of consent subject to the proposed conditions will result in the environment being better protected and overflow incidents being better managed (with more transparency and better information), than if consent is declined.

6 Section 104, Resource Management Act 1991

6.1 I now discuss the relevant statutory considerations, commencing with Section 104 of the Resource Management Act 1991 (RMA) which states:

104 Consideration of applications

- (2) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to—
 - (a) any actual and potential effects on the environment of allowing the activity; and
 - (ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and
 - (b) any relevant provisions of
 - i. a national environmental standard:
 - ii. other regulations:
 - iii. a national policy statement:
 - iv. a New Zealand coastal policy statement:
 - v. a regional policy statement or proposed regional policy statement:
 - vi. a plan or proposed plan; and
 - (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

6.2 The remainder of my evidence addresses clauses (a), (b) and (c) above. The conditions that I have discussed in the previous section of my evidence focus on avoiding, remedying and mitigating potential adverse effects associated with the network overflow incidents. The applicant does not propose offset or compensation measures in relation to any residual adverse environmental effects and so I do not discuss clause (ab) above any further.

7 Effects on the environment

- 7.1 The s42A report discusses the following environmental effects in sections 8.1 to 8.6:
 - Effects on water quality (8.1), including:
 - Effects on freshwater ecology (8.1.1)
 - Effects on public health (8.1.2)
 - o Effects on groundwater (8.1.3)
 - Effects on amenity values (8.2), including:
 - Pleasantness (8.2.1)
 - Aesthetic coherence (8.2.2)
 - Cultural amenity values (8.2.3)
 - o Recreational (8.2.4)
 - Effects on cultural values (8.3)
 - Economic effects (8.4)
 - Positive effects (8.5)
 - Cumulative effects (8.6)
- 7.2 I use the same structure in my evidence below. For the record, the definition of "environment" in s2 of the RMA is:

Environment includes—

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) all natural and physical resources; and
- (c) amenity values; and
- (d) the social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) or which are affected by those matters

Effects on water quality

- 7.3 I defer to Dr Olsen's evidence and conclusions regarding these effects. There are two main comments that I would like to make from a planning perspective.
- 7.4 My first comment relates to the following statement in the ORC s42A report³⁹:

Dr Greer has reviewed the assessment provided by Dr Olsen for the applicant. Dr Greer has noted that the ecology assessment thoroughly describes the risk of wastewater overflows entering waterbodies when they occur and the sensitivity of receiving environments to such discharges. However, without adequate understanding of the frequency, duration, quantity and quality of the discharges it is not possible to quantify the actual and potential adverse effects. It is our opinion that this is a significant issue for the application and is one of the reasons why we are recommending that it is declined.

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Section 8.1.1 of ORC report (page 14)

- 7.5 I consider that the comment about "not understanding the frequency, duration, quantity and quality" of the discharges, and therefore being unable to quantify the actual and potential effects, misses the point of the application and ignores the fact that network overflows do occur, and will continue to occur, despite the best efforts of QLDC to reduce them to the maximum extent that it practicably can.
- 7.6 Such acknowledgements are found elsewhere in the s42A report, for example the following statements:
 - We agree with the applicant that replacing all infrastructure would come at a prohibitive cost and would be unlikely to eliminate the discharges;⁴⁰
 - It is acknowledged that discharges from wastewater infrastructure, in a general sense, are unavoidable; ⁴¹ and
 - In this case, we consider that the applicant has provided all reasonable information to enable an assessment to be made. This is regardless of the fact that this information does not provide sufficient evidence to quantify the effect of the discharge.
- 7.7 Based on the above, there appears to be acknowledgement by ORC Planners of the inevitability of some overflows and the difficulty, or rather impossibility, of predicting where and when they might occur, and what volume and duration they might be. The issue, as I see it, is that this acknowledgement is not subsequently reflected in the ORC Planners' evaluations of the various effects of granting the consent sought. That the effects of not granting the consent will be no less (and, without conditions of consent, could potentially be greater) than the effects of granting the consent seems not to have been considered.
- 7.8 Irrespective of whether consent is granted, QLDC will continue to strive to reduce overflows to the extent it practicably can. If consent is declined, then unfortunately but inevitably, overflow events beyond QLDC control will still occur. I consider that the additional rigour, independent review and consent authority oversight that would be imposed by the conditions in **Attachment 1** mean that granting consent will have a greater likelihood of leading to reduced overflows and improved environmental outcomes than declining the consent.
- 7.9 My second comment relates to Dr Greer's statement, seemingly embraced by the ORC Planners, that "it must be assumed that the discharge could be frequent, of high volume (and duration) and into sensitive receiving water bodies". In my opinion, this is a worst case assumption. In contrast, the evidence of QLDC's Mr Baker⁴³ indicates that over a 3.5 years period (from July 2015 to November 2018), there were 136 overflow incidents from the QLDC network of which 17 overflows either reached a waterbody, or had the potential to do so (conservatively, it is assumed that they all did reach water). This equates to an average of between 5-6 overflow incidents reaching water per year. I note from Mr Baker's evidence⁴⁴ that the 17 overflow incidents reaching water in this 3.5 year period resulted from:

Page 35 of ORC report (section 9.1.10)

Page 22 of ORC report (section 8.7)

Page 24 of ORC report

Refer paragraph 3.4 of Mr Baker's evidence

Refer paragraph 3.2 of Mr Baker's evidence

- 3 fat blockages;
- 4 foreign object blockages;
- 4 tree root obstacles;
- 1 broken pipe;
- 1 choke;
- 4 other blockages.
- 7.10 The remaining 119 overflows that were recorded as *not* reaching water also resulted from a variety of causes that were primarily or wholly outside QLDC's control. My planning point is that the 5-6 overflow incidents reaching water per year will likely still occur, in an unpredictable manner, irrespective of this consent being granted or not granted. However, I accept that some may be larger than others and also that not all overflows, and their corresponding effects, may be caused by factors outside QLDC's control (even though the data indicates that most causes are beyond their reasonable control). For this reason, condition 11 has been drafted to identify unauthorised discharges that would continue to be subject to the prospect of enforcement action.

Effects on amenity values

- 7.11 Much of the previous discussion applies also to these effects. The ORC s42A report sets out the definition of amenity values as contained in the RMA and the regional plan. The report also comments on the perception of many submitters that consent would be tantamount to a "license to pollute". With the additional conditions that I have recommended in **Attachment 1**, I consider that the consent, if granted, would most certainly not be a license to pollute.
- 7.12 I do not agree with the following comment in the s42A report⁴⁵

Authorising the discharge could diminish the perceived naturalness of the receiving waterbodies thereby damaging the image relied upon by the tourism industry.

7.13 As a result of my previous work for QLDC, including the Stage 1 appeals on the strategic chapters of the Proposed District Plan, I have had considerable exposure to "visitor/tourism sector" and "resilient economy" topics in the district. I have no doubt at all that QLDC is acutely aware of the importance of the visitor economy for the district and that QLDC is a strong advocate for environmental and landscape protection. For the reasons that I have discussed in s4 of my evidence (key issues), and s5 (conditions), I consider that in the context of this existing and inevitably ongoing (despite best intent and efforts) situation, the granting of consent subject to the proposed conditions will result in the environment being better protected and overflow incidents being better managed than if consent is declined.

Effects on cultural values

7.14 I agree with, and adopt as part of my evidence, the following extract from the s42A report⁴⁶:

Schedule 1D of the RPW identifies cultural and spiritual values for lakes and rivers throughout Otago. The values associated with the various receiving waterbodies

Page 17 of ORC report (section 8.2.1)

Page 19 of ORC report (section 8.3)

are described in Section 8 of this report. Further to this, the applicant commissioned a Cultural Values Statement (CVS) that was prepared by Aukaha which has identified that the receiving water bodies are of strong cultural significance.

In the Ngāi Tahu Claims Settlement Act (1998), the Clutha River/Mata-Au, Lake Wakatipu, Lake Hawea and Lake Wanaka are identified as areas subject to Statutory Acknowledgement. Many of the other rivers subject to the application are tributaries of these water bodies. The CVS outlined the responsibilities of the applicant (and Consent Authority) to consider Kāi Tahu values as identified in Iwi Management Plans in relation to the activity that may diminish these values. The relevant Iwi Management Plans indicate that Māori generally oppose the concept of discharges into any water body, particularly where the discharge contains human waste. Such discharges impact on the mauri (life-force) of the waterbody as well as access and customary use values such as mahika kai and kohanga.

- 7.15 I understand that any discharge of untreated wastewater to waterbodies is culturally offensive. As I have said previously, such discharges are unacceptable and their occurrence should be avoided to the greatest extent practicable. Members of the QLDC project team have met with representatives from Kai Tahu, Aukaha and Te Ao Mārama Incorporated and have endeavoured to address actual and potential effects on cultural values by drafting conditions to ensure good response protocols, incident notification, investigations, reporting, reviews and associated preventative and remedial actions.
- 7.16 I have discussed the conditions previously, and here I would note Condition 10 in particular that requires all reports that are to be sent to ORC and Ministry of Health (namely, incident notifications, incident reports, photographic surveys and ecological reports) to be sent simultaneously to Kai Tahu, Aukaha and Te Ao Mārama Incorporated. I have also suggested other amendments and new conditions so that, in my opinion, when all this is considered, granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes, and consequently lesser effects on cultural values, compared with declining consent.

Economic effects

- 7.17 I referred in paragraph 7.13 to my recent exposure to "visitor/tourism sector" and "resilient economy" planning topics in the district and that, as a result, I have no doubt at all that QLDC is acutely aware of the importance of the visitor economy for the district and that QLDC is a strong advocate for environmental and landscape protection.
- 7.18 I consider that granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes, and consequently less potential for adverse economic effects, compared with declining consent.

Positive effects

7.19 I do not consider that the application will, in itself, lead to positive effects on the environment. The benefits of granting consent, in my opinion, are more to do with providing a more robust and transparent framework for the reduction of overflows and adverse effects over time. However, the ORC section 42A report contains a statement under this subheading that I would like to comment on.

- 7.20 The ORC Planners state⁴⁷ that QLDC does not need to be granted consent in order to do a whole suite of things to improve its wastewater network and reduce overflows (things such as investments, education campaigns, monitoring, contractual obligations and improvements). I addressed this in paragraph 4.12 of my evidence where I agreed and then documented a long list of initiatives and investments that QLDC has done, is doing now, and plans to do in future, irrespective of whether this consent is granted or not. Then, in paragraph 4.13 of my evidence, I discussed the <u>additional</u> safeguards and benefits that the granting of consent will achieve, but that will not be available to ORC, and the wider community, should consent be declined. These are repeated here only as summary bullet points:
 - ORC input into the Wastewater Overflow Response Procedure;
 - New visual and ecological assessment and reporting in relation to incidents;
 - Comprehensive annual monitoring reports;
 - ORC oversight of QLDC's Education Communications Plans and maintenance and capital investment plans related to wastewater network
 - independent review reports; and
 - Annual consent review opportunities with potential for new/amended conditions.

Cumulative effects

7.21 The s42A report adopts the same theme about lack of data when it states⁴⁸:

There is a lack of credible data to support the applicant's assumption of an infrequent and random discharge. Therefore it must be assumed that a number of successive discharges cold occur to a single receiving water body.

7.22 The ORC Planners express the view that the applicant has not proposed adequate measures to manage cumulative effects. In response, I consider that the amended and new conditions proposed in **Attachment 1** (including conditions 7, 9, 11, 13, 15 and 16) do now provide a better framework for management of cumulative effects.

8 Relevant planning documents

- 8.1 I agree with the ORC Planners⁴⁹ that the relevant planning documents in respect of this application are:
 - The Regional Plan: Water for Otago;
 - The Regional Policy Statement and Proposed Regional Policy Statement;
 - The National Policy Statement for Freshwater Management;
 - The National Policy Statement for Urban Development Capacity 2016;
 - The National Environmental Standard for Sources of Human Drinking Water.

Page 21 of ORC report (section 8.5)

Page 21 of ORC report (section 8.6)

Page 23 of ORC report (section 9.1.3)

Regional Plan: Water for Otago (RPW)

- 8.2 Appendix F to the AEE (Statutory and Non-Statutory Assessment) sets out a comprehensive assessment of the application against the relevant objectives and policies of the Otago Regional Plan: Water⁵⁰. I agree with the assessment and adopt it as part of my evidence.
- 8.3 The objectives and policies set out below are those that I consider to be the most relevant for consideration of this application:
 - **Objective 5.3.1** To maintain or enhance the natural and human use values, identified in Schedules 1A, 1B and 1C, that are supported by Otago's lakes and rivers.
 - **Objective 5.3.2** To maintain or enhance the spiritual and cultural beliefs, values and uses of significance to Kai Tahu, identified in Schedule 1D, as these relate to Otago's lakes and rivers.
 - **Objective 5.3.4** To maintain or enhance the amenity values associated with Otago's lakes and rivers and their margins.
 - **Policy 5.4.2** In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding, in preference to remedying or mitigating:
 - (1) Adverse effects on:
 - (a) Natural values identified in Schedule 1A;
 - (b) Water supply values identified in Schedule 1B;
 - (c) Registered historic places identified in Schedule 1C, or archaeological sites in, on, under or over the bed or margin of a lake or river;
 - (d) Spiritual and cultural beliefs, values and uses of significance to Kāi Tahu identified in Schedule 1D;
 - (e) The natural character of any lake or river, or its margins;
 - (f) Amenity values supported by any water body; and
 - (2) Causing or exacerbating flooding, erosion, land instability, sedimentation or property damage.
 - **Policy 5.4.3** In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding adverse effects on: (a) Existing lawful uses; and (b) Existing lawful priorities for the use, of lakes and rivers and their margins.
 - **Policy 5.4.4** To recognise Kai Tahu's interests in Otago's lakes and rivers by promoting opportunities for their involvement in resource consent processing.
 - **Policy 5.4.8** To have particular regard to the following features of lakes and rivers, and their margins, when considering adverse effects on their natural character:
 - (a) The topography, including the setting and bed form of the lake or river;
 - (b) The natural flow characteristics of the river;
 - (c) The natural water level of the lake and its fluctuation;
 - (d) The natural water colour and clarity in the lake or river;
 - (e) The ecology of the lake or river and its margins; and
 - (f) The extent of use or development within the catchment, including the extent to which that use and development has influenced matters (a) to (e) above.
 - **Policy 5.4.9** To have particular regard to the following qualities or characteristics

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Refer section 4.2.6 (pages 23-28) of Appendix F of the AEE.

of lakes and rivers, and their margins, when considering adverse effects on amenity values:

- (a) Aesthetic values associated with the lake or river; and
- (b) Recreational opportunities provided by the lake or river, or its margins.
- **Objective 7.A.1** To maintain water quality in Otago lakes, rivers, wetlands, and groundwater, but enhance water quality where it is degraded.
- **Objective 7.A.2** To enable the discharge of water or contaminants to water or land, in a way that maintains water quality and supports natural and human use values, including Kāi Tahu values.
- **Objective 7.A.3** To have individuals and communities manage their discharges to reduce adverse effects, including cumulative effects, on water quality.
- **Policy 7.B.2** Avoid objectionable discharges of water or contaminants to maintain the natural and human use values, including Kāi Tahu values, of Otago lakes, rivers, wetlands, groundwater and open drains and water races that join them.
- **Policy 7.B.3** Allow discharges of water or contaminants to Otago lakes, rivers, wetlands and groundwater that have minor effects or that are short-term discharges with short-term adverse effects.
- **Policy 7.B.8** Encourage adaptive management and innovation that reduces the level of contaminants in discharges.
- **Policy 7.C.1** When considering applications for resource consents to discharge contaminants to water, to have regard to opportunities to enhance the existing water quality of the receiving water body at any location for which the existing water quality can be considered degraded in terms of its capacity to support its natural and human use values.
- **Policy 7.C.2** When considering applications for resource consents to discharge contaminants to water, or onto or into land in circumstances which may result in any contaminant entering water, to have regard to:
 - (a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects;
 - (b) The financial implications, and the effects on the environment of the proposed method of discharge when compared with alternative means; and
 - (c) The current state of technical knowledge and the likelihood that the proposed method of discharge can be successfully applied.
- **Policy 7.C.4** [set out in full in paragraph 5.10 (consent duration) and discussed in paragraphs 5.11 to 5.13]
- 8.4 If this application sought consent to directly or indirectly cause new overflows, or prolong existing overflows, or otherwise enable overflows that could be practicably avoided, then such an application would clearly be contrary to all or most of the above provisions. However, from the evidence of Messrs Hansby, Glasner, Baker and Ms Moogan, it is clear to me that this is *not* the situation.
- 8.5 As I have discussed already, I would not be supportive of a consent being granted that authorises any and all overflow types and which effectively removes ORC's ability to undertake enforcement action in appropriate cases. This would be contrary to the above objectives and policies. However, again, this is not the situation, at least not now as a result of recommended Condition 9 (visual and ecological assessment) and Condition 11 (unauthorised discharges).

- 8.6 Having regard to all the recommended conditions in **Attachment 1**, I consider that granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes compared with declining the application and dealing with the inevitable overflows via the status quo approach. Taking this a step further, I consider that this outcome (greater likelihood of reduced overflows and improved environmental outcomes) is more consistent with the above objectives and policies than the status quo.
- 8.7 I also note that Policy 7.B.3 specifically allows discharges that have minor effects or that are short-term discharges with short-term effects. I consider that this policy direction is directly relevant to this application where each of the occasional overflow incidents will be short-term and with short-term effects (I refer to Dr Olsen's evidence to support this view). Furthermore, Condition 11 will ensure that overflow discharges authorised by this consent will meet this description of short-term discharges with short-term effects. I consider that Policy 7.C.2 (including all three clauses) is also directly relevant for this application. This requires regard to be had to the nature of the discharge, sensitivity of the receiving environment, financial implications relative to alternatives, and current state of technical knowledge.

Regional Policy Statement for Otago, proposed Regional Policy Statement and Partially Operative Regional Policy Statement

- 8.8 Appendix F to the AEE (Statutory and Non-Statutory Assessment) sets out a comprehensive assessment of the application against the relevant objectives and policies of the Proposed and Operative Otago Regional Policy Statements⁵¹.
- 8.9 The s42A report explains⁵² the background, current status and interrelationships between the Operative Regional Policy Statement, the Proposed Regional Policy Statement and Partially Operative Regional Policy Statement. I adopt that material, including the identification of the relevant objectives and policies. I do not, however, adopt the evaluative comments.
- 8.10 My discussion in paragraphs 8.3 to 8.6 (in relation to the Regional Plan) also applies to my evaluation of the application against the Operative RPS, Proposed RPS and Partially Operative RPS. Clearly the discharge of untreated wastewater is contrary to the relevant objectives and policies of these documents. However, so is the status quo. Recommended Condition 7 (Review of Consent Conditions), Condition 9 (visual and ecological assessment), Condition 11 (unauthorised discharges), Condition 15 (Annual Monitoring Report) and Condition 16 (Independent Review), in conjunction with the other recommended conditions, enable me to conclude that the application does adopt both a precautionary approach and an adaptive management approach consistent with Policies 1.1.2, 5.4.2 and 4.4.3⁵³ of the Partially Operative RPS.
- 8.11 The s42A report makes the following statement in discussing Policy 6.5.5 of the operative RPS:

However, as the applicant has been aware of this unacceptable discharge for many years, it is not unreasonable to expect that steps should have been previously implemented to resolve this issue. Accepting that completely overhauling the

Refer sections 4.2.4 and 4.2.5 (pages 8-22) of Appendix F of the AEE.

Page 27 of ORC report (section 9.1.5)

Pages 29 and 31 of ORC report (section 9.1.5.2)

system would have a prohibitive cost, seeking to enable all discharges through a consent does not appear to be contemplated or supported by this policy.

- 8.12 I consider that the evidence of Messrs Hansby, Glasner, Baker and Ms Moogan shows that QLDC has in fact put in place numerous initiatives, and has made many investments, in an endeavour to reduce overflows and achieve desired environmental outcomes as much as it can. A sample of these initiatives and investments were set out in rather a long list in paragraph 4.12 of my evidence and I encourage the Hearing Commissioners to look back at that paragraph.
- 8.13 Having regard to the additional benefits that can be gained by granting the consent, compared with declining it, as discussed in paraph 4.13 of my evidence, I consider that granting the consent will lead to a greater likelihood of reduced overflows and improved environmental outcomes, which is more consistent with the objectives and policies of the Operative RPS, Proposed RPS and Partially Operative RPS, than the status quo.

National Policy Statement for Freshwater Management

8.14 I consider that the following objectives and policies of the National Policy Statement for Freshwater Management (**NPS-FM**) are most relevant for consideration of this application:

Objective AA1 - To consider and recognise Te Mana o te Wai in the management of fresh water.

Objective A1 - To safeguard:

- a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water; and
- b) the health of people and communities, as affected by contact with fresh water;

in sustainably managing the use and development of land, and of discharges of contaminants.

Objective A2 - The overall quality of fresh water within a freshwater management unit is maintained or improved while:

- a) protecting the significant values of outstanding freshwater bodies;
- b) protecting the significant values of wetlands; and
- c) improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.

Policy A4 and direction (under section 55) to regional councils - By every regional council amending regional plans (without using the process in Schedule 1) to the extent needed to ensure the plans include the following policy to apply until any changes under Schedule 1 to give effect to Policy A1 and Policy A2 (freshwater quality limits and targets) have become operative:

- 1. "When considering any application for a discharge the consent authority must have regard to the following matters:
 - a. the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and
 - b. the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.
- 2. When considering any application for a discharge the consent authority must have regard to the following matters:

- a. the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their contact with fresh water; and
- b. the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their contact with fresh water resulting from the discharge would be avoided.
- 3. This policy applies to the following discharges (including a diffuse discharge by any person or animal):
 - a. a new discharge or
 - a change or increase in any discharge of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

Policy A7 - By every regional council considering, when giving effect to this national policy statement, how to enable communities to provide for their economic well-being, including productive economic opportunities, while managing within limits.

- 8.15 I consider that transitional Policy A4 is applicable, rather than Policies A1 to A3, because I understand that ORC has not yet progressed through the National Objectives Framework process of the NPS-FM to establish freshwater management units, values, attribute states and limits. I have included Policy A4 as relevant even though Clause 3 states that it applies only to a new discharge or a change or increase in any discharge. In this case, there is a record of existing network overflow discharges over the years, but these have never before been authorised so I regard them as new for the purpose of the NPS-FM.
- 8.16 Turning then to assess the application with regard to Objective AA1,
 Objective A1, Objective A2 and Policy A4 (Clause 1 and 2), I note Dr Olsen's
 conclusion regarding the occasional, temporary overflows that are the subject of this application⁵⁴:

It is unlikely that short-term, unplanned discharges will contribute meaningfully towards the risk of long-term eutrophication of these ecosystems, given their likely infrequency and the mitigation measures proposed in the application.

8.17 I also note Dr Hudson's conclusion⁵⁵ as stated below:

Having considered the unplanned nature of these discharge events, the likely health risks, and having reviewed the emergency response plan and the QLDC capital improvement plan, I am satisfied that the response plan will adequately protect recreational water users, consumers of potable water, as well as communities considerable distances from the likely discharge sites.

8.18 Based on the above conclusions of Dr Olsen and Dr Hudson, I consider that the application is consistent with Objective A1, Objective A2 and Policy A4 (Clause 1 and 2) particularly given the increased rigour proposed by the consent conditions (which is not available under the status quo situation of existing, but unfortunately inevitable, unauthorised discharges). With the robust conditions proposed, I consider that granting consent will have a greater likelihood of leading to reduced overflows and improved environmental outcomes

Refer paragraph 14.6 of Dr Olsen's evidence.

Refer paragraph 2.9 of Dr Hudson's evidence.

(recognising Te Mana o te Wai and consistent with Objective AA1) compared with declining consent.

- 8.19 I note that Policy A7 requires consideration of how communities may be enabled to provide for their economic wellbeing. I consider that effective reticulated wastewater networks in urban communities is fundamental not just for the social and environmental wellbeing of those communities (not the focus of the policy) but also for economic wellbeing of those communities. Highly functioning infrastructure (which I believe is a fair characterisation of the QLDC wastewater network despite not being 100% spill proof) underpins economic activity in urban communities.
- 8.20 Overall I consider that granting the consent will lead to a greater likelihood of reduced overflows and improved freshwater outcomes over time, which is more consistent with the objectives and policies of the NPS-FM than the status quo.

National Policy Statement for Urban Development Capacity 2016

8.21 I consider that the following objectives and policies of the National Policy Statement on Urban Development Capacity (NPS-UDC) are most relevant for consideration of this application, albeit somewhat peripherally:

Objective A1 - Effective and efficient urban environments that enable people and communities and future generations to provide for their social, economic, cultural and environmental wellbeing.

Objective A3: Urban environments that, over time, develop and change in response to the changing needs of people and communities and future generations.

- 8.22 The above objectives are relevant only to the extent that there is likely little disagreement that reticulated wastewater networks are fundamental to the wellbeing and growth of urban communities, which is the focus of the NPS-UDC.
- 8.23 However, there is nothing specific in the NPS-UDC to guide whether either granting or declining of consent is appropriate in this case, as Queenstown's urban communities will continue to enjoy the benefits of well-performing reticulated networks regardless of this consent outcome.
- 8.24 I note the following extract from the ORC s42A report⁵⁶:

In a sensitive receiving environment, wastewater systems should be designed and maintained to ensure that they can cater for all reasonably expected eventualities. Systems that are expected to fail on a regular basis, and discharge untreated wastewater to the environment do not provide for communities' current and future social, economic, cultural and environmental wellbeing. Consequently, the proposal is inconsistent with the NPSUDC.

8.25 I disagree with the above ORC Planners' comments and conclusion. In contrast, I agree with Dr Hudson's statement below:⁵⁷

Despite high standards of construction, operation and maintenance, sewer systems are vulnerable to the actions of humans, weather events and wear and tear. Separately or in concert these factors lead to failure, during which events untreated

Refer section 9.1.7 of ORC report (page 33).

Refer paragraph 2.2 of Dr Hudson's evidence.

wastewater may be discharged to land or water. A failsafe sewer system is yet to be developed, so periodic unplanned discharge of sewage (and associated human health risks) should be anticipated.

8.26 So, to the extent that occasional overflow discharges go "hand in hand" with the existence of reticulated wastewater networks (as all territorial authorities in the country experience) then I consider the application is consistent with the NPS-UDC.

National Environmental Standard for Sources of Human Drinking Water

8.27 The s42A report explains⁵⁸ the relevance of this National Environmental Standard (**NES**). I adopt that evidence in terms of the identification of relevant regulations within the NES. I defer to Dr Hudson's evidence regarding potential effects on drinking water sources and I defer to Ms Moogan's evidence regarding QLDC's overflow response protocols. I note that recommended Condition 14 (Future wastewater networks) requires, in clause (c), that wastewater pipes, manholes, and pump stations are not located in proximity to community drinking water takes from lakes and rivers.

9 Other relevant matters

Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 – The Cry of the People, Te Tangi a Tauira

- 9.1 Appendix F to the AEE (Statutory and Non-Statutory Assessment) sets out a comprehensive assessment of the application against the relevant policies of this lwi Management Plan⁵⁹. I agree with the assessment and adopt it as part of my evidence.
- 9.2 The s42A report explains the relevance of this lwi Management Plan as it expresses the attitudes and values of the four Rūnanga Papatipu o Murihiku Awarua, Hokonui, Ōraka/Aparima and Waihōpai⁶⁰. I agree with the ORC Planners' identification of relevant policies in this Plan.
- 9.3 The submission in opposition from Runanga Papatipu o Murihiku is acknowledged and respected. I understand that any discharge of untreated wastewater to waterbodies is culturally offensive. As I have said previously, such discharges are unacceptable and their occurrence should be avoided to the greatest extent practicable. The applicant, assisted by myself more recently, has endeavoured to address the issues of concern to the submitter, and set out in this Plan, by drafting conditions to ensure good response protocols, incident notification, investigations, reporting, reviews and associated preventative and remedial actions.
- 9.4 Condition 10 in particular requires that all incident notifications, incident reports, photographic surveys and ecological reports that are to be sent to ORC and Ministry of Health will be sent simultaneously to Te Ao Mārama Incorporated, Aukaha and Kai Tahu. I have also suggested a reduced term of 20 years and other amendments and new conditions so that, in my opinion, when

Refer section 9.1.8 of ORC report (Page 33)

Refer section 5.3.3 (pages 34-41) of Appendix F of the AEE.

Refer section 9.1.9.1 of ORC report (Page 34)

all this is considered, granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes compared with declining consent. I consider that these improvements are consistent with the outcomes sought by this Iwi Management Plan.

9.5 I note, however, that for the above conclusion to be reached by others would require an acceptance that, to some extent, overflows cannot be entirely avoided despite best intent and management. I am aware that some people do not accept this and I respect their concerns.

The Kāi Tahu ki Otago Natural Resource Management Plan 2005 (NRMP)

- 9.6 Appendix F to the AEE (Statutory and Non-Statutory Assessment) sets out a comprehensive assessment of the application against the relevant policies of this lwi Management Plan. ⁶¹ I agree with the assessment and adopt it as part of my evidence.
- 9.7 The s42A report also explains the relevance of this Iwi Management Plan as it expresses the attitudes and values of the four Papatipu Rūnaka: Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga⁶². I agree with the ORC Planners' identification of relevant objectives and policies in this Plan.
- 9.8 To avoid repetition, I refer to the discussion in paragraphs 9.3 to 9.5 above which I consider applies equally to evaluation of the application in terms of this Plan.

Water Conservation (Kawarau) Order 1997

- 9.9 Appendix F to the AEE (Statutory and Non-Statutory Assessment) sets out the text of sections 3-5 of the Water Conservation (Kawarau) Order 1997⁶³.
- 9.10 I note that the waterbodies specified in Schedule 1 of the Order are those in their natural state that contain one or more outstanding amenity and intrinsic values⁶⁴. The Order requires their outstanding values to be sustained.⁶⁵ The water bodies must be preserved "as far as possible" in their natural state.⁶⁶
- 9.11 Clause 3(5) states:

Except as provided in clauses 5 and 6, the exercise by a regional council of its functions and powers under section 30(1)(e) and (f) of the Act (as they relate to water) are restricted or prohibited so as to retain the preserved waters as far as possible in their natural state.

9.12 I will return to the clause 5 exception shortly. Clause 6 applies in geographically discrete locations, which do not extend to all of the areas covered by the present application.

Refer section 5.3.2 (pages 31-34) of Appendix F of the AEE.

Refer section 9.1.9.2 of ORC report (Pages 34-35)

Refer section 5.2 (pages 29-30) of Appendix F of the AEE.

As listed in clause 3(1) of the Order.

⁶⁵ Refer clause 3(2) of the Order.

Refer clause 3(4) of the Order.

9.13 I note that the waterbodies specified in Schedule 2 of the Order are those which are no longer in their natural state but which contain one or more amenity and intrinsic values which warrant protection because they are considered outstanding. The Order requires these outstanding values to be sustained. The waterbodies are declared to have one or more outstanding characteristics as set out in Schedule 2 that are to be protected. A restriction on the exercise of a regional council's functions and powers exists, similar to that stated above but without the reference to natural state and with specific restrictions listed in Schedule 2 relating to various matters, including the management of water quality to specified standards (different water quality classes apply to different parts of waterbodies).

9.14 Clause 5 (Exemptions) states:

The restrictions and prohibitions in clauses 3(5) and 4(5) and Schedule 2 do not limit the regional council's functions or powers to grant a resource consent or to make a rule for any part of the preserved waters or protected waters for all or any of the following purposes:

- (a) maintenance or protection of any network utility operation (as defined in section 166 of the Act) ...
- 9.15 Contrary to the ORC Planners' opinion,⁷¹ it is my opinion that the application is able to be granted notwithstanding this Water Conservation Order for reasons set out below.
- 9.16 On the one hand, if it is accepted that manholes and pump stations act as "fuses" within the wastewater network (in addition to their access and pumping functions) and that such fuses are essential for protection of public health and the integrity of the system, and further that most of the overflows arise at such points in the network, then the clause 5(a) exemption likely applies.
- 9.17 On the other hand, if the above points are not accepted, then I rely on the evidence of Dr Olsen where he concludes⁷²:

It is unlikely that short-term, unplanned discharges will contribute meaningfully towards the risk of long-term eutrophication of these ecosystems, given their likely infrequency and the mitigation measures proposed in the application.

9.18 I understand Dr Olsen's conclusion to be that, perhaps other than for infrequent and short durations in very localised places that vary over time, the applicable water quality standards will be maintained. This can be extended to a similar conclusion regarding the associated amenity and intrinsic values of scheduled waterbodies, which will be sustained.

Lake Wanaka Preservation Act 1973

Refer clause 4(1) of the Order.

Refer clause 4(2) of the Order.

⁶⁹ Refer clause 4(4) of the Order.

⁷⁰ Refer clause 4(5) of the Order.

⁷¹ Refer section 9.1.9.3 of ORC report, incorrectly numbered 6.1.9.3 (Page 35)

Refer paragraph 14.6 of Dr Olsen's evidence.

9.19 Appendix F to the AEE (Statutory and Non-Statutory Assessment) sets out the text of sections 4 and 5 of the Lake Wanaka Preservation Act 1973⁷³. One of the stated purposes of the Act is⁷⁴:

To maintain and, as far as possible, to improve the quality of water in the lake

9.20 The AEE does not set out s8, but it is relevant as it states (emphasis added):

In the exercise of its functions under the Resource Management Act 1991 in respect of the lake and its tributaries, the Otago Regional Council **shall have regard to the purposes of this Act** and shall give effect to the policy of the Government in relation to those functions as communicated to it from time to time in writing by the Minister of Conservation.

9.21 It is my opinion that, with the robust suite of conditions proposed, granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes compared with declining consent. I consider that these improvements and safeguards will maintain water quality in Lake Wanaka, consistent with the purpose of this Act.

10 Section 105, Resource Management Act

10.1 Section 105(1) of the RMA states:

If an application is for a discharge permit or coastal permit to do something that would contravene section 15 or section 15B, the consent authority must, in addition to the matters in section 104(1), have regard to—

- (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
- (b) the applicant's reasons for the proposed choice; and
- (c) any possible alternative methods of discharge, including discharge into any other receiving environment.
- 10.2 I consider that these matters have been fully addressed in the collective evidence of the QLDC witnesses. I disagree with the ORC Planners' opinion that the applicant has not adequately considered alternatives and find this difficult to reconcile with their acknowledgements elsewhere, such as:
 - We agree with the applicant that replacing all infrastructure would come at a prohibitive cost and would be unlikely to eliminate the discharges;⁷⁵
 - It is acknowledged that discharges from wastewater infrastructure, in a general sense, are unavoidable ⁷⁶; and
 - In this case, we consider that the applicant has provided all reasonable information to enable an assessment to be made. This is regardless of the fact that this information does not provide sufficient evidence to quantify the effect of the discharge.

⁷³ Refer section 5.1 (pages 28-29) of Appendix F of the AEE.

Refer clause 4(d) of the Act.

Page 22 of ORC report (section 8.7)

Page 24 of ORC report

Page 35 of ORC report (section 9.1.10)

10.3 The Hearing Commissioners are required to have regard to the matters set out in paragraph 10.1 above. I have done this and reach the conclusion that s105 presents no issues for the granting of consent in this case.

11 Section 107, Resource Management Act

- 11.1 Section 107 of the RMA states (emphasis added):
 - (1) Except as provided in subsection (2), a consent authority shall not grant a discharge permit or a coastal permit to do something that would otherwise contravene section 15 or section 15A allowing—
 - (a) the discharge of a contaminant or water into water; or
 - (b) a discharge of a contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water; or
 - (ba) the dumping in the coastal marine area from any ship, aircraft, or offshore installation of any waste or other matter that is a contaminant,—

if, **after reasonable mixing**, the contaminant or water discharged (either by itself or in combination with the same, similar, or other contaminants or water), is **likely to give rise to all or any of the following effects in the receiving waters**:

- (c) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:
- (d) any conspicuous change in the colour or visual clarity:
- (e) any emission of objectionable odour:
- (f) the rendering of fresh water unsuitable for consumption by farm animals:
- (g) any significant adverse effects on aquatic life.
- (2) A consent authority may grant a discharge permit or a coastal permit to do something that would otherwise contravene section 15 or section 15A that may allow any of the effects described in subsection (1) if it is satisfied—
- (a) that exceptional circumstances justify the granting of the permit; or
- (b) that the discharge is of a **temporary nature**; or
- (c) that the discharge is associated with necessary maintenance work—and that it is **consistent with the purpose of this Act** to do so.

11.2 The s42A report states:

With regard to S107(2) as the discharges are not exceptional, associated with maintenance works or temporary (given there is no restriction proposed to their frequency or duration), a discharge permit cannot be granted for this activity. This is a key issue for this application that the Hearing Panel must carefully consider.

- 11.3 I agree that the discharges are not exceptional. I disagree that they are not temporary. Given the nature of the overflows as described and discussed in the collective evidence of QLDC witnesses (upon which I rely), I consider that each of the overflow incidents can be regarded as temporary, regardless of duration (within reason of course). Certainly, QLDC's evidence is that it has set tight response targets for overflow incidents in its operations and maintenance contracts and that its contractors are exceeding those targets, both for responses and resolutions.
- 11.4 This said, I am aware that many submissions have asked for a limit to be placed on the volume and/or duration of the overflow discharges that QLDC seeks to authorise through this application and I have turned my mind to whether this can be achieved (having regard to the unpredictable nature of the overflows and the predominant causes beyond QLDC's control).

- 11.5 I have previously expressed the view that I would not be supportive of a consent being granted that authorises any and all overflow types and which, in doing so, effectively removes ORC's ability to undertake enforcement action in appropriate cases.
- 11.6 My proposed solution is to include two new conditions, being Condition 9 (visual and ecological assessment) and Condition 11 (unauthorised discharges). These are set out in **Attachment 1** to my evidence. Condition 9 will ensure that initial visual surveys and photographic evidence is collected for all incidents that reach water, or are suspected to have done so. Then, for those incidents where the initial evidence confirms the presence of specified visual indicators, Condition 9 then requires the collection of data and expert interpretation of the data in the form of ecological assessment and reports.
- 11.7 There are three clauses to recommended Condition 11 which set out overflows that will *not* be authorised by this consent, if granted. Clauses (a) and (b) relate to any QLDC actions or inactions that cause or aggravate the effects of overflow incidents. Clause (c) goes a step further in that it would apply regardless of cause. It is an attempt to provide a limit as requested by many submitters, above which an overflow would not be authorised by the consent and, therefore, may be subject to the prospect of enforcement action.
- 11.8 I have drawn upon the content of s107 of the RMA in drafting Condition 11.

 However, I am mindful that by suggesting a quantitative limit for duration (24 hours), instead of using a qualitative descriptor such as "temporary" as used in s107(2)(b) I am recommending a condition that is potentially significantly more onerous for QLDC in the event of a larger overflow event.
- 11.9 I would be comfortable if Condition 11 was scaled back so as to be no more onerous than s107 of the RMA requires, if the Hearing Commissioners should determine that to be more appropriate. For example, the condition could be worded so that unauthorised discharges are those that result in the specified "s107 effects" as well as being proven to be "more than temporary". This language is a little uncertain for a condition but it may be acceptable given that decisions to initiate (and ultimately decide the outcome of) enforcement action require judgement to be applied based on an evidence base (facts and circumstances of the incident concerned).
- 11.10 In my opinion, s107 need not present an issue for the granting of consent (subject to conditions) in this case.

12 Part 2, Resource Management Act

Section 8, Treaty of Waitangi

12.1 Section 8 of the RMA states:

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

12.2 I consider that the application does not conflict the principles of the Treaty of Waitangi. As noted in the s42A report, the key principles are commonly referred to as 'partnership, participation and protection'.

- 12.3 I consider that the applicant has consulted genuinely with mana whenua and has responded with proposed conditions that seek to address their expressed concerns (participation principle).
- 12.4 Condition 8(b) requires notification of all overflow events to ORC, Ministry of Health, Te Ao Mārama Incorporated, Aukaha and Kai Tahu. Condition 10 then requires that all incident reports, photographic surveys and ecological reports be sent simultaneously to the same parties (an expression of partnership principle, along with other conditions that have also been developed following consultation with mana whenua).
- 12.5 I consider that the proposed conditions will ensure good response protocols, incident notification, investigations, reporting, reviews and associated preventative and remedial actions and that granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes compared with declining consent. I consider that these improvements are consistent with the principles of the Treaty of Waitangi.

Section 7, Other matters

12.6 Section 7 of the RMA states (emphasis added):

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

- (a) kaitiakitanga:
- (aa) the ethic of stewardship:
- (b) the efficient use and development of natural and physical resources:
- (ba) the efficiency of the end use of energy:
- (c) the maintenance and enhancement of amenity values:
- (d) intrinsic values of ecosystems:
- (e) [Repealed]
- (f) maintenance and enhancement of the quality of the environment:
- (g) any finite characteristics of natural and physical resources:
- (h) the protection of the habitat of trout and salmon:
- (i) the effects of climate change:
- (j) the benefits to be derived from the use and development of renewable energy.
- 12.7 The clauses in bold emphasis are those that I consider relevant to this application. The Hearing Commissioners are required to have particular regard to these matters. For reasons that I have covered already, and drawing upon the evidence of QLDC witnesses collectively, and that of Dr Olsen and Dr Hudson specifically in relation to the scientific expert evidence, I conclude that the application (subject to the robust suite of conditions proposed) can be considered as consistent with s7. My comments in paragraph 12.5 are relevant to this s7 assessment.

Section 6, Matters of national importance

12.8 Section 6 of the RMA states (emphasis added):

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:
- (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:
- (c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:
- (d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:
- (e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:
- (f) the protection of historic heritage from inappropriate subdivision, use, and development:
- (g) the protection of protected customary rights:
- (h) the management of significant risks from natural hazards.
- 12.9 The clauses in bold emphasis are those that I consider relevant to this application. The Hearing Commissioners are required to recognise and provide for these matters.
- 12.10 I agree with the following statement in the s42A report⁷⁸:

Schedule 1A of the RPW identifies the upper Clutha River/Mata-Au catchment as containing many outstanding natural features. The catchment also contains many values of national importance including lakes that are protected by a Conservation Order and a Preservation Act. Furthermore many of these waterbodies can also be considered iconic of New Zealand. This catchment contains significant habitats of indigenous fauna and cultural values, which have been illustrated through the submissions received from DOC and mana whenua.

- 12.11 For reasons that I have covered already, and drawing upon the evidence of QLDC witnesses collectively, and that of Dr Olsen and Dr Hudson specifically in relation to the scientific expert evidence, I conclude that the application (subject to the robust suite of conditions proposed) makes provision for these s6 matters and is not inconsistent with them.
- 12.12 My comments in paragraph 12.5 are again relevant to this s6 assessment.

Section 5, Purpose

- 12.13 Section 5 of the RMA states (emphasis added):
 - (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.
 - (2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—
 - (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
 - (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
 - (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

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Page 37 of ORC report

- 12.14 I consider that the application, as confined by the now proffered conditions, will achieve the purpose of the RMA. The proposed conditions will ensure good response protocols, incident notification, investigations, reporting, reviews and associated preventative and remedial actions. In my opinion granting consent will have the greater likelihood of leading to reduced overflows and improved environmental outcomes compared with declining consent.
- 12.15 Drawing upon the evidence of all the QLDC witnesses, including Dr Olsen and Dr Hudson, I consider that if consent is granted (subject to the recommended conditions):
 - a) The district's wastewater system (physical resource) will be able to continue meeting the needs of the district's community (with safeguards in place and the prospect of continued improvements); and
 - b) The life-supporting capacity of the district's waterbodies (and those downstream, in neighbouring districts) will be safeguarded; and
 - Adverse effects will be avoided, remedied and mitigated as a result of robust condition (including measures that would not be available if consent was declined).

13 Planning evaluation and conclusion

- 13.1 For all the reasons set out in this evidence, I consider that the application is able to be granted (subject to the recommended conditions) as it:
- a) Will enable better environmental outcomes than if consent is declined (noting that overflows will inevitably still arise if consent is declined).
- b) Is appropriate having regard to all the considerations in ss 104, 105 and 107 of the RMA
- c) Is consistent with the purpose and principles of the RMA as set out in ss 5 to 8 of the Act.

Andrew Michael Collins 18 October 2019

Attachments

- 1: Recommended conditions of consent (recent changes highlighted)
- 2: Recommended conditions of consent (clean copy)

Attachment 1 to Collins evidence

Recommended conditions

In General Accordance

1. The discharge authorised by this consent must only be overflow of wastewater as described in the discharge permit application lodged with the Consent Authority on 8 April 2019 and subsequent amendments made to the application on 5 June 2019 and 13 September 2019. If there are any inconsistencies between the application and this consent, the conditions of consent shall prevail.

Physical Scope of Network Consent

- 2. This Network Consent authorises wastewater overflow discharges from the following:
 - a) Wastewater collection networks owned and/or operated by the Consent Holder at the time of consent approval, located in:
 - Queenstown including Arthurs Point, Fernhill / Sunshine Bay, Frankton, Kelvin Heights, Shotover Country and Lakes Hayes Estate, Lake Hayes, and Arrowtown;
 - (ii) Wanaka and Albert Town;
 - (iii) Lake Hāwea;
 - (iv) Luggate; and
 - (v) Cardrona township.
 - b) Future wastewater collection networks which at the time of consent approval either do not exist, or are not owned and/or operated by the Consent Holder but have the potential to be in the future, including but not limited to the following areas:
 - (i) Kingston;
 - (ii) Glenorchy;
 - (iii) Cardrona;
 - (iv) Hāwea Flat;
 - (v) Glendhu Bay;
 - (vi) Luggate;
 - (vii) Jacks Point and Village;
 - (viii) Hanley Farms;
 - (ix) Coneburn (industrial zoned area and special housing area); and
 - (x) Millbrook Resort area.

Refer to Condition 14 for design requirements applicable to future wastewater collection networks and to Condition 15 for the timing of when these future areas will be subject to the conditions of this consent.

 $\underline{\textit{Note}}$: For clarity this Network Consent does not authorise wastewater discharges from wastewater treatment plants.

Access

Comment [AC1]: Refer Condition 1 in Appendix 3, Section 42A report. This is ORC's suggested wording, accepted by QLDC.

Comment [AC2]: Refer Condition 2 in Appendix 3, Section 42A report. Minor edits since. This is QLDC's suggested wording. 3. The Consent Holder shall ensure that access to relevant parts of the wastewater network is available at all reasonable times to the Consent Authority or its agents for the purpose of carrying out inspections, surveys, investigations, tests, measurements and to take samples.

Maintain Records on Overflows

- 4. The Consent Holder must maintain a record of wastewater overflows that reach water or have the potential to reach water. This record must include:
 - a) The specific location where the overflow occurred;
 - b) The approximate start time of the overflow if this is known or can be estimated;
 - c) The day and time the overflow was notified to the Consent Holder (or its operations and maintenance contractors);
 - d) The time that the respondent person(s) was onsite at the overflow location;
 - e) The day and time that the overflow was stopped;
 - f) The approximate flow rate and the total volume of the wastewater discharged if this can be ascertained or estimated;
 - g) If the overflow reached a waterbody or if it only had the potential to reach a waterbody;
 - h) Where an overflow has reached a waterbody, actions taken by the responding person(s) to physically clean up the overflow at the site including, cleaning up spilled material;
 - i) The cause of the overflow if this can be determined;
 - j) What other actions were taken, if necessary, in terms of maintenance, remedial works or renewal to fix the underlying cause of the overflow;
 - k) Date of the last maintenance undertaken prior to this incident in the vicinity of the overflow.
 - *) When the Consent Authority, the Ministry of Health, and Kāi Tahu were notified of the overflow and the date that this occurred.

This record shall be available, on request, to the Consent Authority.

Lapsing of Consent

5. For the purposes of Section 125 of the Resource Management Act 1991, this consent will not lapse.

Duration of Consent

6. The duration of this consent in accordance with section 123 of the Resource Management Act 1991 shall be 35-20 years.

Review of Consent Conditions

- 7. The Consent Authority may, in accordance with section 128 and 129 of the Resource Management Act, within 3 months of the Annual Monitoring Report being provided in any year in accordance with condition 15 serve notice on the Consent Holder of its intention to review the conditions of this consent. Any such review shall be 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 must allow for:
 - a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of

Comment [AC3]: Refer Condition 3 in Appendix 3, Section 42A report. Minor edits since. ORC and QLDC agreed wording.

Comment [AC4]: Refer Condition 4 in Appendix 3, Section 42A report. Minor edits since. This is QLDC's suggested wording.

Comment [AC5]: Refer Condition 5 in Appendix 3, Section 42A report. This is ORC's suggested wording, accepted by QLDC.

Comment [AC6]: Refer
Condition 6 in Appendix 3,
Section 42A report. QLDC
accept a shorter consent
duration. QLDC also refer
to the safeguards inherent
in the annual review
condition below.

Comment [AC7]: Refer
Condition 7 in Appendix 3,
Section 42A report. This
is QLDC's suggested
wording. Have not amended
as per ORC suggestion as
consider it useful to
align review with the
Annual Monitoring Reports
and with any independent
review report (see new
Condition 14).

- the consent and which it is appropriate to deal with at a later stage, or which become evident after the date of commencement of the consent; and
- b) Addition of new condition(s) as necessary to avoid, remedy or mitigate any unforeseen adverse effects on the environment, including in response to any independent review report in accordance with Condition 16.

Wastewater Overflow Response Procedure

- 8. The Consent Holder shall prepare a Wastewater Overflow Response Procedure which sets out the procedures in the event of a wastewater overflow. It must include:
 - a) How the Consent Holder is notified of an overflow;
 - b) What The authorities are to be notified of a wastewater overflow event (including the Consent Authority, Ministry of Health and Kai Tahu, via Aukaha and Te Ao Marama Incorporated), along with email and phone contact details for each. those parties listed in condition 4 and 10 of this consent);
 - c) How the wastewater overflow is to be cleaned up, including when it is appropriate to check underwater areas where there is a potential for wastewater or solids to build up;
 - d) Where an overflow appears to have reached surface water, a sampling protocol for the collection of water samples and the procedures for visual inspection, photographic survey and, where required by Condition 9, ecological survey and reporting;
 - e) The format and content for an Incident Report, including but not limited to the information listed in Condition 10 of this consent;
 - f) Trigger points for a review/investigation process e.g. if there has previously been repeat overflows occurring at the same asset, or in the same immediate area;
 - g) If an investigation is triggered in (f) above, the review process to be undertaken to ascertain the underlying cause and recommend potential remediation if required;
 - How lessons learnt from each overflow incident are to be conducted, including timeframes, and how any lessons learnt are to be implemented and then monitored going forward; and
 - i) A copy of these consent conditions as an appendix.

Within two months of the date of this consent, A finalised version of the Wastewater Overflow Response Procedure (the Procedure) must be provided to the Consent Authority for certification that it meets the above requirements. Within 5 working days of being certified, prepared by the Consent Holder must issue the Procedureand issued to its wastewater network operations and maintenance contractors and then implement and adhere to it throughout the duration of this consent within 2 months of consent being granted.

A copy of the Procedure along with confirmation of its issue to contractors must be provided to the Consent Authority for its information within 5 working days of issue to the Consent Holders contractors.

The Procedure <u>will must</u> be reviewed at least every three years after the issue of the previous version in order to ensure latest best practice is incorporated where practicable and that contact details in Condition 8(b) remain up to <u>date</u>. Updated versions of the Procedure must be provided to the Consent Authority within 5 working days of issue to the Consent Holder wastewater network operations and maintenance contractors.

Visual and ecological assessment

9. Where it is identified that an overflow has reached a surface waterbody (i.e. stream, river or lake), the Consent Holder shall immediately undertake a visual

Comment [AC8]: Refer
Condition 8 in Appendix 3,
Section 42A report. This
is QLDC's suggested
wording, with edits made
to enable ORC to certify
the content of the
Response Procedure as
meeting the condition
prior to its issue to the
Contractor.

Comment [AC9]: New
proposed condition.

inspection and photographic survey of the water body/waterbodies within 50 m of where the discharge enters water for signs of:

- a) Deposited solids;
- b) Growths of sewage fungus or filamentous algae;
- Dead/distressed aquatic life (e.g. fish). Any dead fish shall be collected, identified, counted and measured.

The results of this visual inspection and photographic survey shall be reported to the Consent Authority within 7 days of the discharge occurring.

Should any of the above be observed, a survey shall be undertaken as soon as reasonably practicable by a suitably qualified freshwater ecologist. In flowing waters, this survey shall be undertaken in the affected waterbody immediately upstream and downstream of where the discharge enters the waterbody and in any other waterbody that may be affected by the wastewater discharge. In lakes, the survey shall be undertaken in the immediate vicinity of where the discharge enters water and within 50 m of that location. As a minimum, the survey shall include the following:

- b) Water samples shall be collected and analysed for 5-day BOD, TN, TP, ammoniacal nitrogen, total and volatile suspended solids;
- c) The extent of deposited solids;
- d) Periphyton cover, including heterotrophic growths (sewage fungus), following protocol RAM-2 of Biggs 2000;
- e) Macroinvertebrate community composition (including calculation of the macroinvertebrate community index (MCI));

The results of this survey shall be reported to the Consent Authority within 90 days of the discharge occurring.

Notification of Wastewater Overflows $\underline{\mbox{ and Incident Reports}}$

- 10. (a) As part of responding to an overflow authorised under this consent the Consent Holder shall notify the Consent Authority, the Ministry of Health, and Kāi Tahu (via Aukaha and Te Ao Marama Incorporated) as soon as practicable in accordance with Condition 8(b).
 - (b) The Incident Report required under Condition 8(e) shall include the following information and, when completed, shall be sent simultaneously to the recipients listed in clause (a): Consent Holder shall notify Kāi Tahu of the incident as follows:
 - a) An email notification to info@aukaha.co.nz
 - b) An email notification to office@tami.maori.nz and phone call to TAMI on 03
 - e) At the time that the Consent Authority is issued a report following the overflow incident, Aukaha and Te Ao Marama shall receive the same report which shall include the following information:
 - (i) The date and time the Consent Holder were notified of the overflow;
 - (ii) The time that the respondent person(s) was onsite the overflow location;
 - (iii) The day and time that the overflow was stopped;
 - (iv) The approximate flow rate and the total volume of the wastewater discharged if this can be ascertained or estimated;

Comment [AC10]: Refer Condition 9 in Appendix 3, Section 42A report. Since renumbered due to insertion of new Condition 9 above.

The edits reflect consultation with Kai Tahu, but modified more recently to achieve consistent and simultaneous reporting requirements to ORC, MoH and Kai Tahu. Instead of including specific phone numbers and email addresses in a consent (details which may change) an amendment is suggested to Condition 8(b) instead.

The words "authorised under this consent" are proposed to be deleted given proposed Condition 11 (unauthorised discharges) below. It is considered that all overflows need to be subject to an Incident Report that should be notified to these parties. Whether Condition 11 is applicable to any incident can be determined afterwards based on the investigations undertaken.

- (v) Clean up procedures undertaken including steps taken to remediate any adverse effects on the receiving environment;
- (vi) The reason that the overflow occurred;
- (vii) What other actions were taken, if necessary, in terms of maintenance, remedial works or renewal to fix the underlying cause of the overflow;
- (viii) The address of the overflow and a topographical map showing the location of the overflow;
- (ix) Any relevant photographs of the overflow
- (c) Any visual inspection and photographic survey results and any ecological report prepared in accordance with Condition 9 shall, when completed, be sent simultaneously to the recipients listed in clause (a),

Unauthorised discharges

- 11. An overflow will not be authorised under this consent if any of the following three circumstances or combination of circumstances apply:
 - a) The overflow reached any surface water body and was caused primarily by the action or inaction of the Consent Holder as a result of:
 - (i) a lack of maintenance of the wastewater network; or
 - (ii) a lack of investment in the capacity in the wastewater network;
 - The overflow reached any surface water body and its effects were aggravated by incident responses that substantially did not comply with the Wastewater Overflow Response Procedure required by Condition 8;
 - <u>c)</u> The overflow, regardless of cause, is assessed as having reached any surface water body for a period of more than 24 hours and the Ecological Report under Condition 9 concludes that the overflow, after reasonable mixing, gave rise to all or any of the following effects in the receiving waters:
 - (i) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:
 - (ii) any conspicuous change in the colour or visual clarity:
 - (iii) any emission of objectionable odour:
 - (iv) the rendering of fresh water unsuitable for consumption by farm animals:
 - (v) any significant adverse effects on aquatic life.

Ongoing Community Awareness

9-12. The Consent Holder shall continue to educate and raise awareness throughout the community, including residents, the construction industry, food industry, and visitors to the District, on how the wastewater system should be used.

The methods (e.g. media, social media, newsletters, print material, meetings) the Consent Holder may use to educate the community is not prescribed by this consent, but the following must be covered in education content (in no particular order and not all to be covered in every education initiative):

- 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) The importance of protecting exposed/open wastewater pipes within construction sites and not allowing How construction material/debris to enter the wastewater networkshould be properly disposed of;

Comment [AC11]: New proposed condition aimed at ensuring, through (a) and (b) that QLDC is held accountable for its own actions or inactions and, through (c) that QLDC is able to be held accountable (regardless of cause) for effects that section 107 of the RMA intends to restrict.

Comment [AC12]: Refer Condition 10 in Appendix 3, Section 42A report. Since renumbered due to insertion of new Conditions 9 and 11 above.

- d) The correct process for obtaining approved connections to the <u>Consent Holder'sQLDC</u> 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.

As part of the Annual Monitoring Report provided to the Consent Authority in accordance with Condition 15 of this consent, an An Education Communications Plan must be prepared within 2 months of the date of this consent being approved, and must be updated then annually, setting out for the following coming financial year:

- a) The What education activities that are proposed with construction, food and tourism industries to communicate the above information relay a) to d) above, and the timing for these activities through the year;
- b) The What wider community education activities that are proposed to communicate the above information relay a) to e) above, and the timing for these activities through the year;
- c) Any other initiatives <u>Council</u> the <u>Consent Holder</u> is undertaking through the improvement of systems and / or changes to, or development of, bylaws which will subsequently assist in educating about the correct use of the wastewater network.

Annual updates of the activities undertaken in accordance with The the Education Communications Plan shall be included can be a standalone document or part of in the Annual Monitoring Report required by Condition 15 document.

Network improvements

- 10.13. Within 12 months of this consent being granted the Consent Holder must undertake a review of its current wastewater network (excluding wastewater treatment plants), identifying where measures to prevent or minimise overflows reaching water could be practicably implemented. Preventative or minimisation measures could include, but are not limited to:
 - a) Providing or increasing storage capacity;
 - b) Providing standby generators at pump stations;

 - $\underline{e})\underline{d})$ Installing alarms which notify a potential problem in the network;
 - e) ____ Constructing overflow ponding areas or diversion flow paths which particularly direct or hold an overflow away from waterbodies or public places.

Within 12 months of the date of this consent, Before the end of the 13th calendar month following this consent being granted, the Consent Holder must provide to the Consent Authority written communication that details:

- a) A summary of the methodology undertaken for the review of the network;
- b) The infrastructure locations where it is practicable to implement preventative measures, what these are, and the proposed timeframe for implementing them, and if the implementation is subject to funding approvals via the public consultation through the Long Term Plan process;
- c) The reasons why preventative maintenance is not appropriate or practicable in any areas. identified as such through the audit process.

Future Wastewater Networks under QLDC control

11.14. Prior to accepting the vesting of new or extended Future wastewater network assets, the Consent Holder shall ensure that they have been designed by the Consent Holder shall be designed and constructed to the following requirements (to the extent practicable and as-relevant at each location):

Comment [AC13]: Refer
Condition 11 in Appendix
3, Section 42A report.
Since renumbered due to
insertion of new
Conditions 9 and 11 above.
Appears that ORC and QLDC
agree wording. The ORC
suggestion of independent
review has been picked up
in suggested new Condition
16 below.

Comment [AC14]: Refer Condition 12 in Appendix 3, Section 42A report. Since renumbered due to insertion of new Conditions 9 and 11 above. Minor edits made as shown. a) Where practicable wastewater Wastewater pipes, manholes, and pump stations must be located or designed such that any overflow occurs to land and not water:

<u>Note</u>: 'to land' is satisfied if this is to a storage tank, ponding area, or diversion flow path which directs an overflow away from a waterbody or public area

- b) Pump stations must be designed with suitable levels of resilience/redundancy including emergency storage capacity and redundancy in the configuration of pumps.÷
 - (i) appropriate level of emergency storage capacity;
 - (ii) Redundancy in the configuration of pumps and pumped mains
- e) Where practicable wastewater pipes, manholes, and pump stations are located away from key recreation areas on lake and river banks
- d) <u>O</u> Where practicable wastewater <u>Wastewater</u> pipes, manholes, and pump stations are not located in proximity to community drinking water takes from lakes and rivers:
- e) d) Design capacity is to allow for future capacity required for potential upstream development, as zoned in the district plan at the time or as reasonably foreseeable;
- <u>f)e)</u> That the wastewater pipes, manholes, and pump stations are easily accessible by personnel and vehicles responding to an overflow event;
- $g) \pm 1$ That any visual screening of pump stations does not outweigh the need to prevent overflows from reaching water;
- h)g) Mitigation measures, where practicable, to prevent overflows reaching water from below ground infrastructure that is located within a high water table area;
- <u>++)h)</u> Applicable wastewater infrastructure will conform to Queenstown Lakes District Council's Subdivision code of practice (based on NZS 4404); and
- $\frac{1}{2}$ All pipelines are constructed to the appropriate NZ Standard (NZS 2566 Buried Flexible Pipelines).

Annual Monitoring Report

12.15. The Consent Holder shall prepare and submit an Annual Monitoring Report to the Consent Authority 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.

The Annual Monitoring Report must include the following information (in no particular order):

- a) The data collected under Condition 4 of this consent_and comparison between the subject year's data and the corresponding data from previous years to identify trends;
- b) A copy of, or a link to, The the Education Communications Plan required under Condition 12 of this consent;
- c) A summary (including evidence) of the education initiatives undertaken by the Consent Holder in accordance with Condition 12 of this consent for the previous financial year;
- d) What work the Consent Holder 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;
- e) Confirmation of what wastewater networks are owned and / or operated by the Consent Holder, including whether any of the future networks listed in Condition 2 of this consent are now owned and / or managed by the Consent Holder and therefore are subject to the conditions of this consent for the current financial year;

Comment [AC15]: Clause (a) covers this already from a design perspective. It is not practicable to avoid locating wastewater assets in these areas (having regard both to the nature of gravity systems and also to the wastewater needs associated with enabling public access along waterbody margins and in reserves generally)

Comment [AC16]: Refer Condition 13 in Appendix 3, Section 42A report. Since renumbered due to insertion of new Conditions 9 and 11 above. Note: The Consent Holder shall notify the Consent Authority within 1 week that it has taken ownership and / or is operating a new part of the wastewater network to which these consent conditions will apply.

- f) Confirmation including evidence that the Consent Holder has implemented a wastewater preventative inspection programme by CCTV or other technology, and how this was implemented in the previous financial year;
- g) A summary of any wastewater maintenance or remedial works beyond "business as usual operating and maintaining the network" implemented in the previous financial year;
- h) Whether any areas of the network were identified as having repeat overflows and what works were undertaken to fix these problem areas;
- i) A summary of what wastewater capital investment works were implemented in the previous financial year;
- j) 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; and
- k) What wastewater capital investment works are programmed to be implemented in the current financial year.

Note: 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.

Independent review

- 16. If requested by the Consent Authority in writing within three months prior to the fifth anniversary of the granting of this consent, or any fifth anniversary thereafter, the Consent Holder shall supply to the Consent Authority a report from an independent appropriately qualified professional who has been approved by the Consent Authority as to qualifications and experience to:
 - a) Certify the extent to which the design and operation, including preventative maintenance, of the wastewater network continue to be robust and capable of ensuring ongoing compliance with the conditions of this consent; and:
 - b) Evaluate and report on new developments in wastewater network technology including:

 - (ii) Any improvements that could be expected by adopting that technology; (iii) The feasibility of adopting that technology; and:
 - (iv) If applicable, to make recommendations on how the robustness and performance of the wastewater network should be maintained and enhanced to achieve ongoing compliance with the conditions of this consent and the timescale within which technological or process/procedural enhancements should be implemented, taking into account the cost/benefit.

Any report required under this condition shall be supplied to the Consent Authority within three months of the Consent Authority's request.

Comment [AC17]: New proposed condition.

Attachment 2 to Collins evidence

Recommended conditions (clean version)

In General Accordance

1. The discharge authorised by this consent must only be overflow of wastewater as described in the discharge permit application lodged with the Consent Authority on 8 April 2019 and subsequent amendments made to the application on 5 June 2019 and 13 September 2019. If there are any inconsistencies between the application and this consent, the conditions of consent shall prevail.

Physical Scope of Network Consent

- 2. This Network Consent authorises wastewater overflow discharges from the following:
 - a) Wastewater collection networks owned and/or operated by the Consent Holder at the time of consent approval, located in:
 - Queenstown including Arthurs Point, Fernhill / Sunshine Bay, Frankton, Kelvin Heights, Shotover Country and Lakes Hayes Estate, Lake Hayes, and Arrowtown;
 - (ii) Wanaka and Albert Town;
 - (iii) Lake Hāwea;
 - (iv) Luggate; and
 - (v) Cardrona township.
 - b) Future wastewater collection networks which at the time of consent approval either do not exist, or are not owned and/or operated by the Consent Holder but have the potential to be in the future, including but not limited to the following areas:
 - (i) Kingston;
 - (ii) Glenorchy;
 - (iii) Cardrona;
 - (iv) Hāwea Flat;
 - (v) Glendhu Bay;
 - (vi) Luggate;
 - (vii) Jacks Point and Village;
 - (viii) Hanley Farms;
 - (ix) Coneburn (industrial zoned area and special housing area); and
 - (x) Millbrook Resort area.

Refer to Condition 14 for design requirements applicable to future wastewater collection networks and to Condition 15 for the timing of when these future areas will be subject to the conditions of this consent.

 $\underline{\textit{Note}}\colon$ For clarity this Network Consent does not authorise wastewater discharges from wastewater treatment plants.

Access

3. The Consent Holder shall ensure that access to relevant parts of the wastewater network is available at all reasonable times to the Consent Authority or its

agents for the purpose of carrying out inspections, surveys, investigations, tests, measurements and to take samples.

Maintain Records on Overflows

- 4. The Consent Holder must maintain a record of wastewater overflows that reach water or have the potential to reach water. This record must include:
 - a) The specific location where the overflow occurred;
 - b) The approximate start time of the overflow if this is known or can be estimated:
 - c) The day and time the overflow was notified to the Consent Holder (or its operations and maintenance contractors);
 - d) The time that the respondent person(s) was onsite at the overflow location;
 - e) The day and time that the overflow was stopped;
 - f) The approximate flow rate and the total volume of the wastewater discharged if this can be ascertained or estimated;
 - g) If the overflow reached a waterbody or if it only had the potential to reach a waterbody;
 - h) Where an overflow has reached a waterbody, actions taken by the responding person(s) to physically clean up the overflow at the site including, cleaning up spilled material;
 - i) The cause of the overflow if this can be determined;
 - j) What other actions were taken, if necessary, in terms of maintenance, remedial works or renewal to fix the underlying cause of the overflow;
 - k) Date of the last maintenance undertaken prior to this incident in the vicinity of the overflow.
 - 1) When the Consent Authority, the Ministry of Health, and $K\bar{a}i$ Tahu were notified of the overflow and the date that this occurred.

This record shall be available, on request, to the Consent Authority.

Lapsing of Consent

5. For the purposes of Section 125 of the Resource Management Act 1991, this consent will not lapse.

Duration of Consent

6. The duration of this consent in accordance with section 123 of the Resource Management Act 1991 shall be 20 years.

Review of Consent Conditions

- 7. The Consent Authority may, in accordance with section 128 and 129 of the Resource Management Act, within 3 months of the Annual Monitoring Report being provided in any year in accordance with condition 15 serve notice on the Consent Holder of its intention to review the conditions of this consent. Any such review shall be 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 must allow for:
 - a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of

- the consent and which it is appropriate to deal with at a later stage, or which become evident after the date of commencement of the consent; and
- b) Addition of new condition(s) as necessary to avoid, remedy or mitigate any unforeseen adverse effects on the environment, including in response to any independent review report in accordance with Condition 16.

Wastewater Overflow Response Procedure

- 8. The Consent Holder shall prepare a Wastewater Overflow Response Procedure which sets out the procedures in the event of a wastewater overflow. It must include:
 - a) How the Consent Holder is notified of an overflow;
 - b) The authorities to be notified of a wastewater overflow event (including the Consent Authority, Ministry of Health and Kai Tahu, via Aukaha and Te Ao Marama Incorporated), along with email and phone contact details for each.;
 - c) How the wastewater overflow is to be cleaned up, including when it is appropriate to check underwater areas where there is a potential for wastewater or solids to build up;
 - d) Where an overflow appears to have reached surface water, a sampling protocol for the collection of water samples and the procedures for visual inspection, photographic survey and, where required by Condition 9, ecological survey and reporting;
 - e) The format and content for an Incident Report, including but not limited to the information listed in Condition 10 of this consent;
 - f) Trigger points for a review/investigation process e.g. if there has previously been repeat overflows occurring at the same asset, or in the same immediate area;
 - g) If an investigation is triggered in (f) above, the review process to be undertaken to ascertain the underlying cause and recommend potential remediation if required;
 - h) How lessons learnt from each overflow incident are to be conducted, including timeframes, and how any lessons learnt are to be implemented and then monitored going forward; and
 - i) A copy of these consent conditions as an appendix.

Within two months of the date of this consent, the Wastewater Overflow Response Procedure (the Procedure) must be provided to the Consent Authority for certification that it meets the above requirements. Within 5 working days of being certified, the Consent Holder must issue the Procedure to its wastewater network operations and maintenance contractors and then implement and adhere to it throughout the duration of this consent.

The Procedure must be reviewed at least every three years after the issue of the previous version in order to ensure latest best practice is incorporated where practicable and that contact details in Condition 8(b) remain up to date. Updated versions of the Procedure must be provided to the Consent Authority within 5 working days of issue to the Consent Holder wastewater network operations and maintenance contractors.

Visual and ecological assessment

- 9. Where it is identified that an overflow has reached a surface waterbody (i.e. stream, river or lake), the Consent Holder shall immediately undertake a visual inspection and photographic survey of the water body/waterbodies within 50 m of where the discharge enters water for signs of:
 - a) Deposited solids;
 - b) Growths of sewage fungus or filamentous algae;

c) Dead/distressed aquatic life (e.g. fish). Any dead fish shall be collected, identified, counted and measured.

The results of this visual inspection and photographic survey shall be reported to the Consent Authority within 7 days of the discharge occurring.

Should any of the above be observed, a survey shall be undertaken as soon as reasonably practicable by a suitably qualified freshwater ecologist. In flowing waters, this survey shall be undertaken in the affected waterbody immediately upstream and downstream of where the discharge enters the waterbody and in any other waterbody that may be affected by the wastewater discharge. In lakes, the survey shall be undertaken in the immediate vicinity of where the discharge enters water and within 50 m of that location. As a minimum, the survey shall include the following:

- a) Physicochemical conditions (dissolved oxygen concentration, dissolved oxygen % saturation, pH, specific conductance);
- b) Water samples shall be collected and analysed for 5-day BOD, TN, TP, ammoniacal nitrogen, total and volatile suspended solids;
- c) The extent of deposited solids;
- d) Periphyton cover, including heterotrophic growths (sewage fungus), following protocol RAM-2 of Biggs 2000;
- e) Macroinvertebrate community composition (including calculation of the macroinvertebrate community index (MCI));
- f) Collection, identification, enumeration and measurement of any dead fish observed.

The results of this survey shall be reported to the Consent Authority within 90 days of the discharge occurring.

Notification of Wastewater Overflows and Incident Reports

- 10. (a) As part of responding to an overflow the Consent Holder shall notify the Consent Authority, the Ministry of Health, and $K\bar{a}i$ Tahu (via Aukaha and Te Ao Marama Incorporated) as soon as practicable in accordance with Condition 8(b).
 - (b) The Incident Report required under Condition 8(e) shall include the following information and, when completed, shall be sent simultaneously to the recipients listed in clause (a):
 - (i) The date and time the Consent Holder were notified of the overflow;
 - (ii) The time that the respondent person(s) was onsite the overflow location;
 - (iii) The day and time that the overflow was stopped;
 - (iv) The approximate flow rate and the total volume of the wastewater discharged if this can be ascertained or estimated;
 - (v) Clean up procedures undertaken including steps taken to remediate any adverse effects on the receiving environment;
 - (vi) The reason that the overflow occurred;
 - (vii) What other actions were taken, if necessary, in terms of maintenance, remedial works or renewal to fix the underlying cause of the overflow;
 - (viii) The address of the overflow and a topographical map showing the location of the overflow;
 - (c) Any visual inspection and photographic survey results and any ecological report prepared in accordance with Condition 9 shall, when completed, be sent simultaneously to the recipients listed in clause (a),

Unauthorised discharges

- 11. An overflow will not be authorised under this consent if any of the following three circumstances or combination of circumstances apply:
 - a) The overflow reached any surface water body and was caused primarily by the action or inaction of the Consent Holder as a result of:
 - (i) a lack of maintenance of the wastewater network; or
 - (ii) a lack of investment in the capacity in the wastewater network;
 - b) The overflow reached any surface water body and its effects were aggravated by incident responses that substantially did not comply with the Wastewater Overflow Response Procedure required by Condition 8;
 - <u>c</u>) The overflow, regardless of cause, is assessed as having reached any surface water body for a period of more than 24 hours and the Ecological Report under Condition 9 concludes that the overflow, after reasonable mixing, gave rise to all or any of the following effects in the receiving waters:
 - (i) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:
 - (ii) any conspicuous change in the colour or visual clarity:
 - (iii) any emission of objectionable odour:
 - (iv) the rendering of fresh water unsuitable for consumption by farm animals:
 - (v) any significant adverse effects on aquatic life.

Ongoing Community Awareness

12. The Consent Holder shall continue to educate and raise awareness throughout the community, including residents, the construction industry, food industry, and visitors to the District, on how the wastewater system should be used.

The methods (e.g. media, social media, newsletters, print material, meetings) the Consent Holder may use to educate the community is not prescribed by this consent, but the following must be covered in education content (in no particular order and not all to be covered in every education initiative):

- 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) The importance of protecting exposed/open wastewater pipes within construction sites and not allowing construction material/debris to enter the wastewater network;
- d) The correct process for obtaining approved connections to the Consent Holder's 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.

An Education Communications Plan must be prepared within 2 months of the date of this consent, and must be updated annually, setting out for the following financial year:

- a) The education activities that are proposed with construction, food and tourism industries to communicate the above information, and the timing for these activities through the year;
- b) The wider community education activities that are proposed to communicate the above information, and the timing for these activities through the year;

c) Any other initiatives the Consent Holder is undertaking through the improvement of systems and / or changes to, or development of, bylaws which will subsequently assist in educating about the correct use of the wastewater network.

Annual updates of the activities undertaken in accordance with the Education Communications Plan shall be included in the Annual Monitoring Report required by Condition 15.

Network improvements

- 13. Within 12 months of this consent being granted the Consent Holder must undertake a review of its current wastewater network (excluding wastewater treatment plants), identifying where measures to prevent or minimise overflows reaching water could be practicably implemented. Preventative or minimisation measures could include, but are not limited to:
 - a) Providing or increasing storage capacity;
 - b) Providing standby generators at pump stations;
 - c) Preventative inspection programme including CCTV inspections with priority areas and frequencies specified
 - d) Installing alarms which notify a potential problem in the network;
 - e) Constructing overflow ponding areas or diversion flow paths which particularly direct or hold an overflow away from waterbodies or public places.

Within 12 months of the date of this consent, the Consent Holder must provide to the Consent Authority written communication that details:

- a) A summary of the methodology undertaken for the review of the network;
- b) The infrastructure locations where it is practicable to implement preventative measures, what these are, and the proposed timeframe for implementing them, and if the implementation is subject to funding approvals via the public consultation through the Long Term Plan process;
- c) The reasons why preventative maintenance is not appropriate or practicable in any areas.

Future Wastewater Networks

- 14. Prior to accepting the vesting of new or extended wastewater network assets, the Consent Holder shall ensure that they have been designed and constructed to the following requirements (to the extent practicable and relevant at each location):
 - a) Wastewater pipes, manholes, and pump stations must be located or designed such that any overflow occurs to land and not water;
 - \underline{Note} : 'to land' is satisfied if this is to a storage tank, ponding area, or diversion flow path which directs an overflow away from a waterbody or public area
 - b) Pump stations must be designed with suitable levels of resilience/redundancy including emergency storage capacity and redundancy in the configuration of pumps.
 - c) Wastewater pipes, manholes, and pump stations are not located in proximity to community drinking water takes from lakes and rivers;
 - d) Design capacity is to allow for future capacity required for potential upstream development, as zoned in the district plan at the time or as reasonably foreseeable;

- e) That the wastewater pipes, manholes, and pump stations are easily accessible by personnel and vehicles responding to an overflow event;
- f) That any visual screening of pump stations does not outweigh the need to prevent overflows from reaching water;
- g) Mitigation measures, where practicable, to prevent overflows reaching water from below ground infrastructure that is located within a high water table area;
- h) Applicable wastewater infrastructure will conform to Queenstown Lakes District Council's Subdivision code of practice (based on NZS 4404); and
- i) All pipelines are constructed to the appropriate NZ Standard (NZS 2566 Buried Flexible Pipelines).

Annual Monitoring Report

15. The Consent Holder shall prepare and submit an Annual Monitoring Report to the Consent Authority 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.

The Annual Monitoring Report must include the following information (in no particular order):

- a) The data collected under Condition 4 of this consent and comparison between the subject year's data and the corresponding data from previous years to identify trends;
- b) A copy of, or a link to, the Education Communications Plan required under Condition 12 of this consent;
- c) A summary (including evidence) of the education initiatives undertaken by the Consent Holder in accordance with Condition 12 of this consent for the previous financial year;
- d) What work the Consent Holder 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;
- e) Confirmation of what wastewater networks are owned and / or operated by the Consent Holder, including whether any of the future networks listed in Condition 2 of this consent are now owned and / or managed by the Consent Holder and therefore are subject to the conditions of this consent for the current financial year;

Note: The Consent Holder shall notify the Consent Authority within 1 week that it has taken ownership and / or is operating a new part of the wastewater network to which these consent conditions will apply.

- f) Confirmation including evidence that the Consent Holder has implemented a wastewater preventative inspection programme by CCTV or other technology, and how this was implemented in the previous financial year;
- g) A summary of any wastewater maintenance or remedial works beyond "business as usual operating and maintaining the network" implemented in the previous financial year;
- h) Whether any areas of the network were identified as having repeat overflows and what works were undertaken to fix these problem areas;
- i) A summary of what wastewater capital investment works were implemented in the previous financial year;
- j) 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; and
- k) What wastewater capital investment works are programmed to be implemented in the current financial year.

Note: 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.

Independent review

- 16. If requested by the Consent Authority in writing within three months prior to the fifth anniversary of the granting of this consent, or any fifth anniversary thereafter, the Consent Holder shall supply to the Consent Authority a report from an independent appropriately qualified professional who has been approved by the Consent Authority as to qualifications and experience to:
 - a) Certify the extent to which the design and operation, including preventative maintenance, of the wastewater network continue to be robust and capable of ensuring ongoing compliance with the conditions of this consent; and:
 - b) Evaluate and report on new developments in wastewater network technology including:
 - (i) A comparison of the new developments in technology available in the preceding five years;
 - (ii) Any improvements that could be expected by adopting that technology;
 - (iii) The feasibility of adopting that technology; and:
 - (iv) If applicable, to make recommendations on how the robustness and performance of the wastewater network should be maintained and enhanced to achieve ongoing compliance with the conditions of this consent and the timescale within which technological or process/procedural enhancements should be implemented, taking into account the cost/ benefit.

Any report required under this condition shall be supplied to the Consent Authority within three months of the Consent Authority's request.