Nathan Borger

From: Brandon Ducharme s 9(2)(a)
Sent: Thursday, 8 July 2021 3:22 PM
To: Mike Botting; Nathan Borger
Cc: Richard Powell; Ulrich Glasner; Nathan Borger; Edgar Planning
Subject: FW: [CGW-21484] Silverlight - Potable Water and Wastewater Demand

Hey gents, with apologies for the day – see below from Richard.

Let me know if we can be of any more assistance to you.

Cheers,

Brandon

Brandon Ducharme PMP MBA CPEng P.Eng PE
Infrastructure Development Engineer | Property & Infrastructure
Queenstown Lakes District Council
M: s 9(2)(a)
E: s 9(2)(a)
QUEENSTOWN LAKES DISTRICT COUNCIL
www.qldc.govt.nz

From: Richard Powell s 9(2)(a)
Sent: Thursday, 8 July 2021 2:24 PM
To: Brandon Ducharme s 9(2)(a)
Subject: RE: [CGW-21484] Silverlight - Potable Water and Wastewater Demand

Hi Brandon,

I have reviewed the expected demands below, I am satisfied that the figures are suitable for representing the proposals demand on the water and wastewater networks.

I can confirm that P&I support, in principal, connections to both the water and wastewater networks from this development, however this is subject to modelling of the proposed demand to ensure there is sufficient capacity within our networks, as there are no funds within the LTP for upgrades required for development of this area any required upgrades identified in the modelling would be at the developers cost.

Let me know if you need anything further on this.

Thanks

Richard

Richard Powell | Infrastructure Development Engineer
Queenstown Lakes District Council
M: s 9(2)(a)
E: s 9(2)(a)

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From: Mike Botting s 9(2)(a)
Sent: Friday, 2 July 2021 4:41 PM
To: Nathan Borger s 9(2)(a) Brandon Ducharme s 9(2)(a) >; Ulrich Glasner s 9(2)(a)
Cc: Mike Wallis s 9(2)(a) Edgar Planning s 9(2)(a)
Subject: RE: [CGW-21484] Silverlight - Potable Water and Wastewater Demand

Hi Ulrich/Brandon

Both Nathan and I are keen to get some sort of response back from P&I hopefully confirming support in principal for connecting Silverlight to Council's infrastructure for wastewater and potable water as discussed previously.

Have you had a chance to review the numbers provided by Nathan in his email below?

Will try calling you both on Monday to discuss further.

Regards
Mike Botting
Principal & Registered Professional Surveyor
M s 9(2)(a)
T s 9(2)(a)

Paterson Pitts Limited Partnership, trading as:
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From: Nathan Borger s 9(2)(a)
Sent: Monday, 28 June 2021 2:24 PM
To: s 9(2)(a)
Cc: Mike Botting s 9(2)(a) ; Mike Wallis s 9(2)(a) Edgar Planning s 9(2)(a)
Subject: RE: [CGW-21484] Silverlight - Potable Water and Wastewater Demand

Good Afternoon,

I'm just following up on this correspondence regarding Silverlight Studios from last week.
Do you have any questions or feedback on the potable water and wastewater volumes below?
Were keen to keep the ball rolling towards an endorsement from QLDC, so maybe we can set up another meeting in the next few days to discuss further if required?

Kind Regards,

Nathan Borger • Civil Engineer
BEngTech, MEngNZ

CGW Consulting Engineers
Auckland • Wellington • Nelson • Christchurch • Wanaka
Ph: s 9(2)(a)
Email: s 9(2)(a) • www.cgwl.co.nz
4 Helwick St, PO Box 169, Wanaka 9343.

From: Nathan Borger
Sent: Wednesday, 23 June 2021 2:18 PM
To: s 9(2)(a)
Cc: Mike Botting s 9(2)(a)
Subject: [CGW-21484] Silverlight - Potable Water and Wastewater Demand

Good Afternoon,

As discussed in our meeting regarding the Silverlight project on the 21/06/2021, we have calculated the estimated potable water and wastewater volumes that we would look to service from QLDC networks.

These volumes are based on potable water being used for human consumption and use only.
Due to this, it has been assumed that the potable water volume into the site, and the wastewater volume out of the site will be roughly equal.
It is proposed that all other water uses such as, irrigation, lake recharge, fire fighting, and wetting down streets for night filming etc, will be sourced from a combination of rainwater recycling, the private water bores on the site, and the Criffel irrigation scheme supply to the site.

The volumes given below are for the full completed development.
In reality this will be built over an extended period, so volumes would increase gradually over 5-10 years for example.

We have assessed the water demand via a number of methods:

Per user basis.
In line with AS/NZS 1547:2012 and QLDC LDSCOP.

User	Number or persons	L/Person/Day	Sum	Notes
Onsite accommodation	400 people	250 L	100,000 L	This allows for 200 staff staying onsite, with families visiting
Daily workers onsite	1000	100 L	100,000 L	Allows for 30L per person for lunch, 30L for dinner, and 40L for toiletries
Visitors	500	50 L	25,000 L	Allows for 30L per person for a meal, and 20L for toiletries
		Total:	225,500 L/Day	

			225 m3/Day	

Per Area Basis.
QLDC LDSCOP:

Industry Use; Medium	0.7 L/sec/Ha
Area	16.1 Ha
Peak factor	2.5
Dilution Factor	2.0
Average flows with peak and dilution factors removed:	2.25 L/s
Volume over 24hr period	**195 m3/Day**

We have compared this to the wastewater discharge coefficients for varying areas and zoning from the Nelson Tasman Land Development Manual:

Area	Ha	L/Sec/Ha	Sum	Notes
Low Density	7.4	0.69	5.1 L/sec	Sound stages and workshops
Normal/Standard Density	7.9	0.81	6.42 L/sec	Majority of the site
High density	0.75	1.08	0.81 L/sec	Accommodation/apartments
		Peak factor	2.5	
		Dilution Factor	2.0	
		Average flows with peak and dilution factors removed:	2.47 L/sec	
		Volume over 24hr period	**213 m3/Day**	

As shown in the tables above, we estimate the potable water and wastewater volumes for this development will be in the range of 180-250m3 per day.

If there is any other information you require, please don't hesitate to get in touch.

Kind Regards,

Nathan Borger • Civil Engineer
BEngTech, MEngNZ

CGW Consulting Engineers
Auckland • Wellington • Nelson • Christchurch • Wanaka
Ph: s 9(2)(a)
Email: s 9(2)(a) • www.cgwl.co.nz
4 Helwick St, PO Box 169, Wanaka 9343.