REGIONAL DISTRICT OF CENTRAL KOOTENAY
BOX 590, 202 Lakeside Drive, NELSON, BC V1L 5R4
ph: 250-352-8165 fax:: 250-352-9300 email: rdck@rdck.bc.ca

RDCK Planning File No. Z2202F
Amendment to Zoning Bylaw No. 1675, 2004
Date: February 16, 2022

You are requested to comment on the attached Amendment Bylaw(s) for potential effect on your agency's interests. We would appreciate your response WITHIN 30 DAYS (PRIOR TO April 1, 2022). If no response is received within that time, it will be assumed that your agency's interests are unaffected. This referral notice has also been provided to adjacent property owners within 100 metres (328 feet) or greater of the subject property for review and comment.

PURPOSE OF THE BYLAW: The property is currently used for residential purposes and there are six campsites that are an accessory use pursuant to Section 1500 of Zoning Bylaw No. 1675, 2004. Horticulture is also an accessory use on the property. The applicant would like to expand the camping operations to 12 sites. The property is 117 hectares in size, and currently has three residences. The principal use of the property will remain residential, and so a site specific amendment to the zoning bylaw to expand camping operations is proposed.

LEGAL DESCRIPTION & GENERAL LOCATION:
DISTRICT LOT 8433 KOOTENAY DISTRICT EXCEPT (1) PARTS INCLUDED IN PLANS 1224 AND 9232 AND (2) PARCEL A (REFERENCE PLAN 679641) (PID 010-646-035)

AREA OF PROPERTY AFFECTED	ALR STATUS	ZONING DESIGNATION	OCP DESIGNATION
Property size: 117 hectares Area of Property Affected: ~ 12 hectares	Not applicable	Rural Residential (R3)	Rural Residential (RR)

APPLICANT/AGENT:
Solita Work

OTHER INFORMATION: ADVISORY PLANNING COMMISSION PLEASE NOTE:
If your Advisory Planning Commission plans to hold a meeting to discuss this Bylaw Amendment application, please note that the applicants must be provided with an opportunity to attend such meeting, in accordance with Section 461, subsection (8) of the *Local Government Act*, which reads as follows:

"If the commission is considering an amendment to a plan or bylaw, or the issue of a permit, the applicant for the amendment or permit is entitled to attend meetings of the commission and be heard."

Please fill out the Response Summary on the back of this form. If your agency's interests are 'Unaffected' no further information is necessary. In all other cases, we would appreciate receiving additional information to substantiate your position and, if necessary, outline any conditions related to your position. Please note any legislation or official government policy which would affect our consideration of this bylaw.

Eileen Senyk

Eileen Senyk, PLANNER
REGIONAL DISTRICT OF CENTRAL KOOTENAY

- ☒ TRANSPORTATION West Kootenay
- ☒ HABITAT BRANCH
- ☒ FRONT COUNTER BC (FLNRORD)
- ☐ AGRICULTURAL LAND COMMISSION
- ☐ REGIONAL AGROLOGIST
- ☐ ENERGY & MINES
- ☐ MUNICIPAL AFFAIRS & HOUSING
- ☒ INTERIOR HEALTH HBE Team, Nelson
- ☐ KOOTENAY LAKES PARTNERSHIP
- ☒ SCHOOL DISTRICT NO. 8
- ☐ WATER SYSTEM OR IRRIGATION DISTRICT
- ☐ UTILITIES (FORTIS, BC HYDRO, NELSON HYDRO, COLUMBIA POWER)

REGIONAL DISTRICT OF CENTRAL KOOTENAY
DIRECTORS FOR:
☐ A ☐ B ☐ C ☐ D ☐ E ☒ F ☐ G ☐ H ☐ I ☐ J ☐ K
ALTERNATIVE DIRECTORS FOR:

FIRST NATIONS
- ☒ KTUNAXA NATION COUNCIL (ALL REFERRALS)
  - YAQAN NUʔKIY (LOWER KOOTENAY)
  - ʔAKINK'UM‡ASNUQ‡IʔIT (TOBACCO PLAINS)
  - ʔAKISQNUK (COLUMBIA LAKE)
  - ʔAQ'AM (ST. MARY'S)
- ☒ OKANAGAN NATION ALLIANCE
  - ☐ C'ƏC'ƏWIXAʔ (UPPER SIMILKAMEEN)
  - ☐ KɬK'ƏR'MÍWS (LOWER SIMILKAMEEN)
  - ☒ SNPÍNTKTN (PENTICTON)
  - ☐ STQAʔTKWƏɬWT (WEST BANK)
  - ☐ SUKNAQÍNX (OKANAGAN)
  - ☐ SWÍWS (OSOYOOS)
  - ☒ SPAXOMƏN (UPPER NICOLA)
- ☒ SHUSWAP NATION TRIBAL COUNCIL
  - ☐ KENPÉSQT (SHUSWAP)

☐ A ☐ B ☐ C ☐ D ☐ E ☒ F ☐ G ☐ H ☐ I ☐ J ☐ K ☐ APC AREA ☒ RDCK FIRE SERVICES – DISTRICT CHIEF (BY AREA) ☒ RDCK EMERGENCY SERVICES ☒ RDCK BUILDING SERVICES ☐ RDCK UTILITY SERVICES ☐ RDCK REGIONAL PARKS	☒ QWʔEWT (LITTLE SHUSWAP) ☒ SEXQELTQÍN (ADAMS LAKE) ☒ SIMPCW ((SIMPCW) ☐ SKEMTSIN (NESKONLITH) ☒ SPLATSÍN (SPLATSÍN FIRST NATION) ☒ SKEETCHESTN INDIAN BAND ☒ TK'EMLUPS BAND

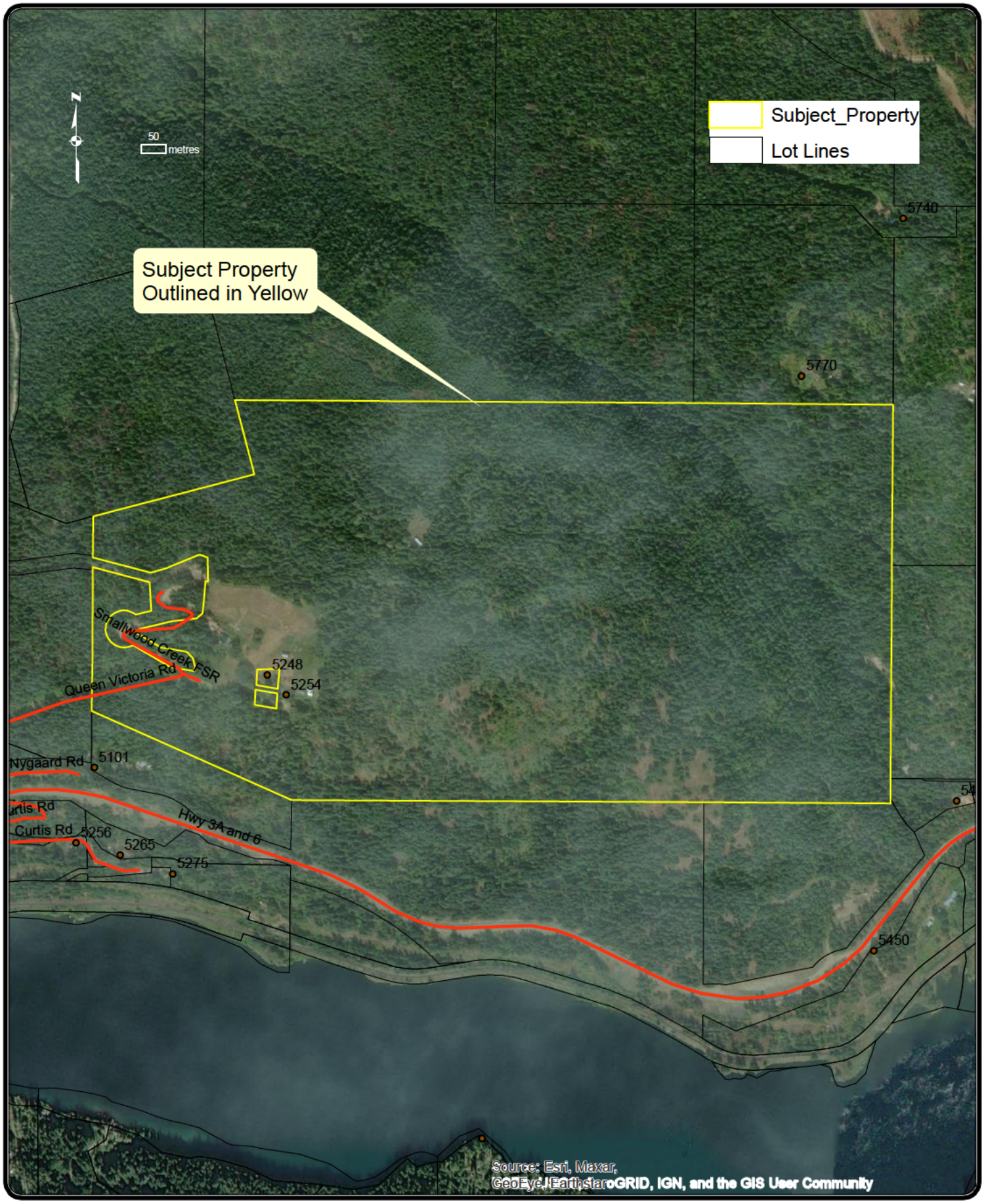
The personal information on this form is being collected pursuant to *Regional District of Central Kootenay Planning Procedures and Fees Bylaw No. 2457, 2015* for the purpose of determining whether the application will affect the interests of other agencies or adjacent property owners. The collection, use and disclosure of personal information are subject to the provisions of FIPPA. Any submissions made are considered a public record for the purposes of this application. Only personal contact information will be removed. If you have any questions about the collection of your personal information, contact the Regional District Privacy Officer at 250.352.6665 (toll free 1.800.268.7325), **info@rdck.bc.ca**, or RDCK Privacy Officer, Box 590, 202 Lakeside Drive, Nelson, BC V1L 5R4.

RESPONSE SUMMARY
PLANNING FILE NO.: Z2202F APPLICANT: SOLITA WORK

Name: Date:

Agency: Title:

RETURN TO: **EILEEN SENYK, PLANNER**
DEVELOPMENT SERVICES
REGIONAL DISTRICT OF CENTRAL KOOTENAY
BOX 590, 202 LAKESIDE DRIVE
NELSON, BC V1L 5R4
plandept@rdck.bc.ca



Bylaw Amendment
Z2202F
Overview Map

Map Projection: UTM Zone 11 Map Datum: NAD83
Date Plotted: Thursday, February 24, 2022

PROPOSAL SUMMARY

We are applying for a Bylaw Amendment (or zoning variance) to allow us to increase the number of campsites on our property. We plan to offer a total of 15 accommodations, a combination of 12 seasonal campstites (open May thru October) and 3 guest rooms (open year-round) in our home. We are applying for a zoning change to allow for:

- **6 additional campsites** *(up to a total of 12)*

Rural Residencial R3 zoning allows us to accommodate up to six campsites and 3 B&B rooms in our home on our family property. Last year we took advantage of these allowances and started building Bear Spring Eco Retreat. In August we opened the retreat offering 4 canvas glamping tent accommodatons with 2 more to be set-up once the septic field is installed (permit approved and attached in this application). We plan to build toilet facilities this spring and are applying for a building permit (see attached permits and drawings).

View from the campsites

Inside a glamping tent

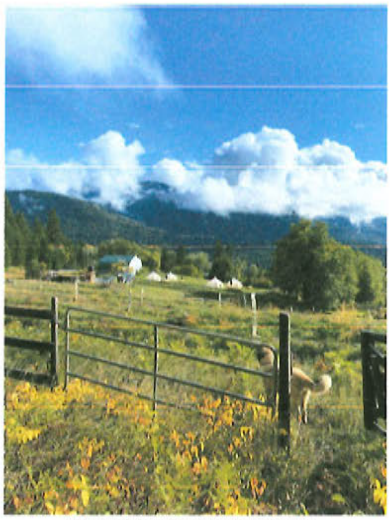
Glamping tents are 13" in diameter and 9' tall

In December, we opened 3 guests rooms in a self contained suite in our residence (5248). Nestled in the mountains with stunning river views, our property includes a barn with guest amenities and events perfect for hosting small gatherings or weddings, edible food gardens and a food forest that will mature in about 8 to 9 years. Our mostly off-grid eco-friendly retreat offers modern luxuries including queen size beds, linens and solar lighting. Enjoy nature walks, foraging, hiking, biking, swimming, skiing, snowshoeing and wild life viewing at or near our sustainable retreat. We're close enough to town to order take-out yet just far enough to see the Milky Way. Located just 12 minutes from the city of Nelson, our almost 300 acre property is perfect for urbanites seeking an outdoor experience immersed in nature without foregoing any of the comforts of home.

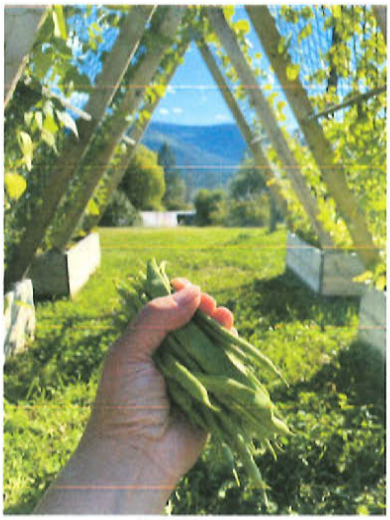
We have also just established a partnership with a young farmer through Young Agrairians to take over some of our garden space for his own food production business. This agreement will ensure not only affordable land for this young entreprenuer but access to local, sustainable food for us. This partnership will create more value on our farm, help build community and compliment the already established peony farm currently in production here.

In addition to this, Solita, already has an established online retail business specializing in Canadian made giftware made from recycled materials. See the online store at shopreworks.ca. This eco shop will make a welcome addition in the retail shop space.

Inside a guest room



View of the campsites and barn



Grean beans

Picking Peonies

Sunflowers

Glamping tents under the Milky Way

Reworks Upcycle Shop product

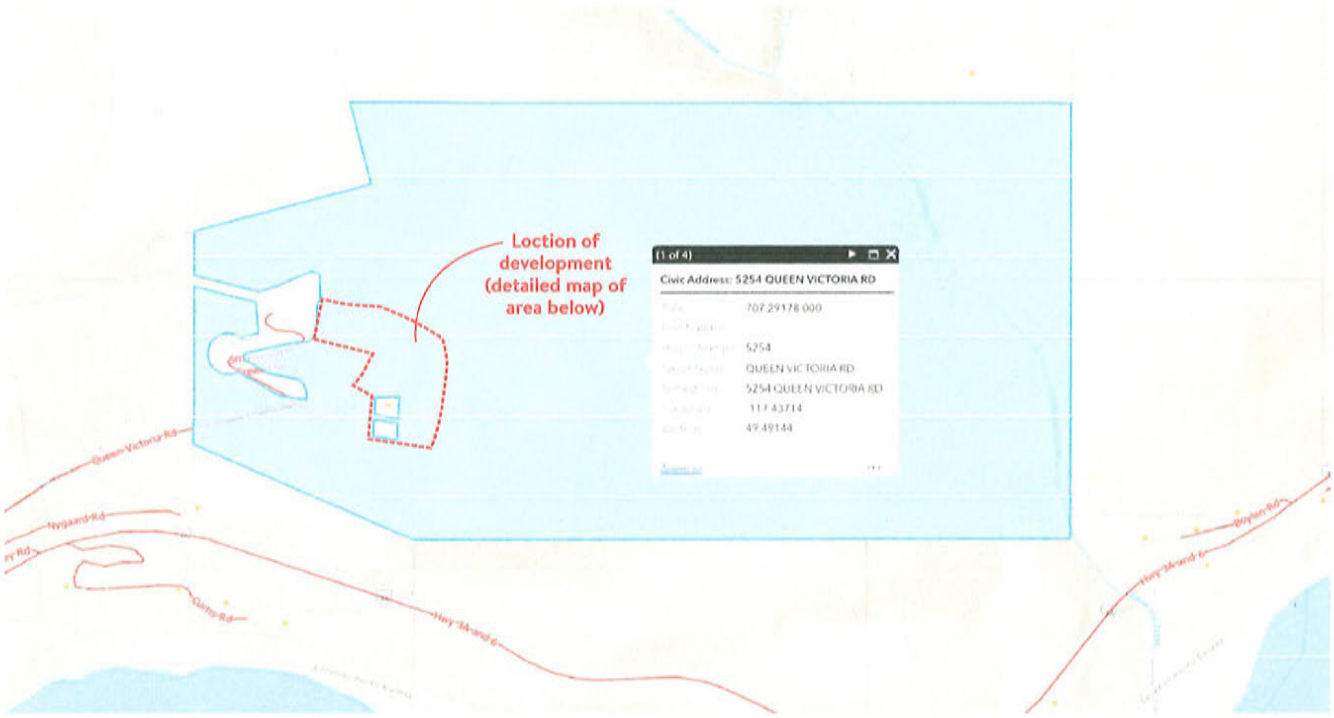
In closing, our vision is to create a beautiful, comfortable place to reconnect with the natural world. To celebrate the wonder and bounty that the world has to offer through our gardens and food forest incorporating permaculture practises. To tread lightly upon the earth and create a healthy, inclusive community for via off-grid gatherings and activities in our barn and surrounding farmlands and forest. We aim to create a sustainable guest experience of comfort and joy for both local and distant visitors alike. The small convenience store/gift shop will give our community access to farm grown food and local artist wares throughout the year.

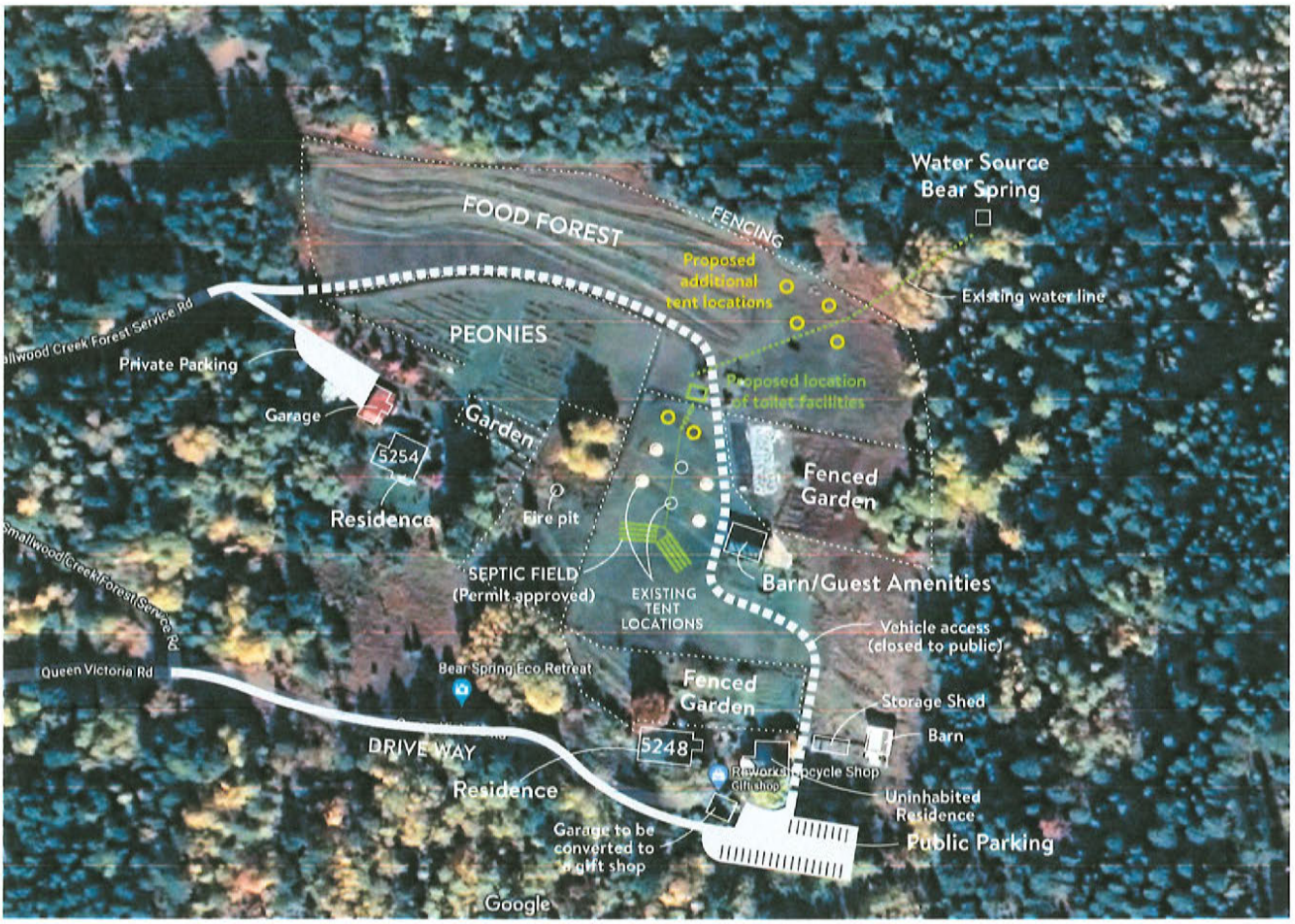
For more information please visit these websites:

Bear Spring Eco Retreat Limited at **bearspringeco.ca**
Reworks Upcycle Shop at **shopreworks.ca**
Dutch Girl Peonies at **peonyfarm.ca**
Young Agrairians at **youngagrarians.org**

E. / G.

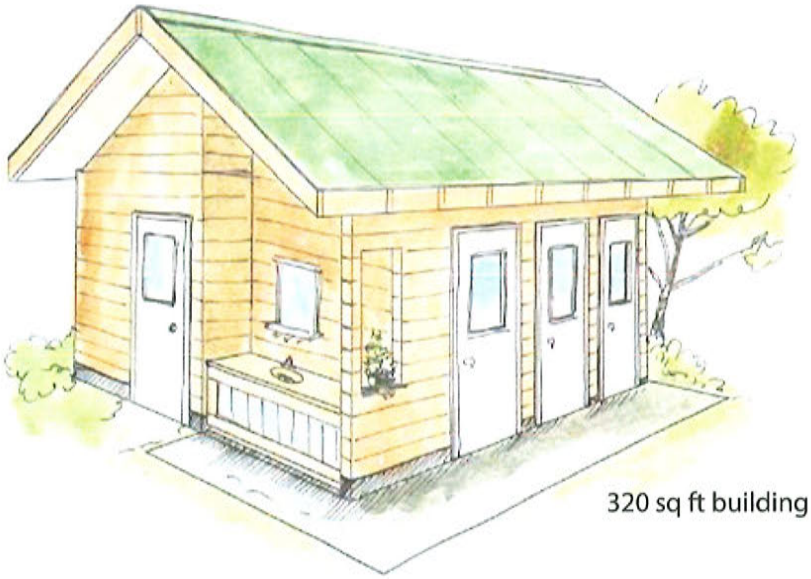
SITE PLAN/LANDSCAPE PLAN





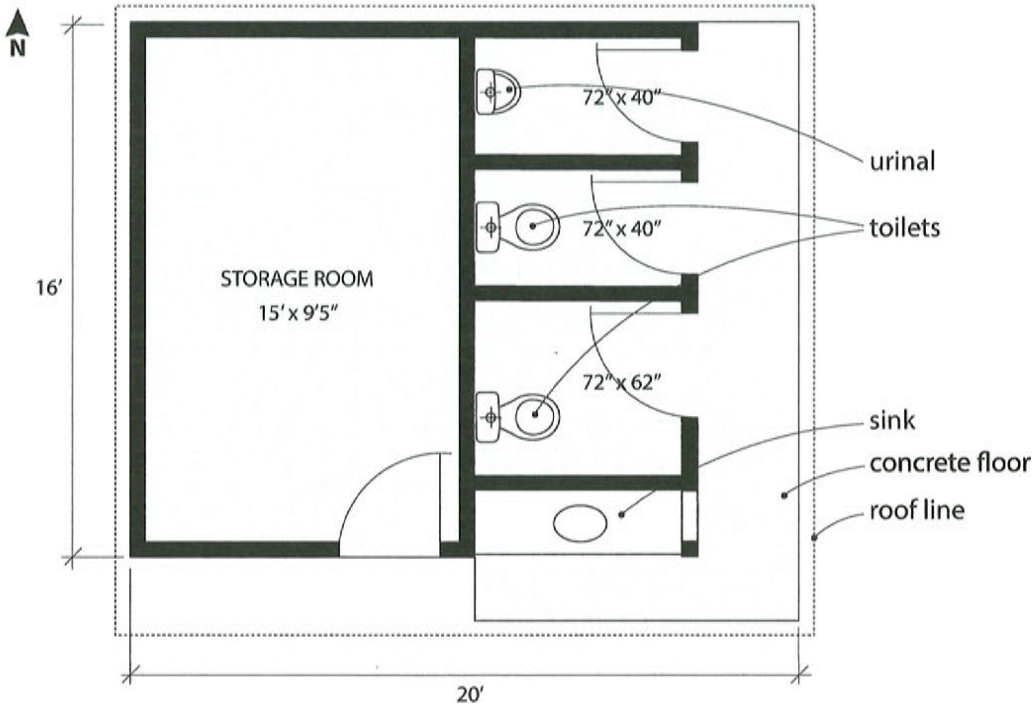
BEAR SPRING ECO RETREAT - WASHROOMS

RENDERING



320 sq ft building

FLOORPLAN



Interior Health

RECORD OF SEWERAGE SYSTEM

Filing # (OFFICE USE ONLY)

1. Property Information

☒ New Construction ☐ Alteration ☐ Repair ☐ Amendment – Original Filing #

Tax Assessment Roll #: 21-707-29178.000

PID #: 010-646-035

Legal Description (Plan, Lot, District Lot, Block Numbers): District Lot 8433 (Except Plan 1224 & EXC PL 9232, PCL A REF PL 67964I Managed Forest 0531)

Street (Civic) Address or General Location: 5254 Queen Victoria Road

City: Beasley

2. Owner Information

Name of Legal Owner: Adriana Work

Mailing Address: [redacted]

Phone: [redacted]

Prov: BC

Postal Code: [redacted]

3. Authorized Person Information

Name of Authorized Person: Van Hemert, Steve

Mailing Address: 2085 Debruyn Road

Phone: 250-425-5351

City: Fruitvale

Prov: British Columbi

Postal Code: V0G 1L1

Registration #: OW0480

Email: svhcontracting@gmail.com

4. Structure Information

Sewerage System Will Serve:

☐ Single Family Dwelling ☒ Other Dwelling/Structure *(specify)* 12 campsites, event center without meal prep

The sewerage system is designed for an estimated minimum daily domestic sewage flow of *(check one)*

☒ Less than or equal to 9,100 litres ☐ More than 9,100 litres but less than 22,700 litres

5. Site Information

Depth of native soil to seasonal high water table or restrictive layer *(cm)*: 100

Information respecting the type, depth and porosity of the soil is attached ☒ Yes ☐ No

GPS Location of System *(decimal degrees)* Latitude: 49.492228 Longitude: -117.437638

Horizontal Accuracy *(m)*: 10 ☒ Recreational GPS ☐ Differential GPS

6. Drinking Water Protection

Will the sewerage system be located less than 30 m from a well? ☐ Yes ☒ No

If yes, attach a professional's report and specify the intended distance _____ *(m)*

Distance of proposed sewerage system to the closest body of surface water: 20 *(m)*

7. System Information

Sewerage treatment method ☒ Type 1 ☐ Type 2 ☐ Type 3

8. Legal or Regulatory Considerations

☒ Construction of the proposed sewerage system will not conflict with legal instruments registered on the property.

Is this filing submitted as the result of an order from the Health Authority? ☐ Yes *(attach a copy of the order)* ☒ No

9. Plot Plan and Specifications

Plot Plan (to scale) and specifications are attached ☒ Yes ☐ No

☒ The plans and specifications are consistent with Standard Practice

Source of Standard Practice: ☒ Ministry of Health Standard Practice Manual ☐ Other

10. Authorized Person's Signature

Signature *(email submission does not require a signature)*: Van Hemert, Steve

Date: 2021-Jun-27

OFFICE USE ONLY

Filing Accepted Date: **2021-Jun-30**

Receipt #: **10333386**

Interior Health
Every person matters

RECEIPT OF RECORD OF SEWERAGE SYSTEM

This receipt acknowledges that the Health Authority has received a completed Record of Sewerage System for the following location:

RECEIPT NUMBER FOR RSS FILING FEE: 10333386

TAX ASSESSMENT ROLL NUMBER: 21-707-29178.000

AUTHORIZED PERSON: Van Hemert, Steve

CIVIC ADDRESS: 5254 Queen Victoria Road, Beasley, BC

LEGAL DESCRIPTION: District Lot 8433 (Except Plan 1224 & EXC PL 9232, PCL A REF PL 67964I Managed Forest 0531)

EFFECTIVE DATE: 2021-Jun-30

Please note that the system work must be completed and a Letter of Certification filed with the Health Authority within two years of the effective date noted.

EXPIRY DATE: 2023-Jun-30

2085 Debruyn Road
Fruitvale BC V0G 1L1
250 425 5351
svhcontracting@gmail.com

Onsite Wastewater System Design

Civic Address: 5254 Queen Victoria Road, Beasley

Legal Description: District Lot 8433 Land District 26 Except Plan 1224 & EXC PL 9232, PCL A REF PL 67964I Managed Forest 0531

PID: 010-646-035

Tax Assessment Roll Number: 21-707-29178.000

Date: May 27, 2021

REGISTERED ONSITE WASTEWATER PRACTITIONER
ASTTBC
STEVE VAN HEMERT
PL IN
OW0480

1.0 Introduction

This onsite wastewater system has been designed following the Sewerage System Standard Practices Manual, Version 3, September 2014 (SPM). This design is based on information gathered during a site assessment completed by SVH Contracting (SVH), a declaration by the property owner, and discussions with the owner and/or the owner's representative.

2.0 Design

2.1 Record of Design:

System Selection Worksheet			
Item	**Value**	**Constraint, opportunity, result**	**Solution and rational**
Site and Soil Constraints			
Soil texture	Sandy loam		
Soil structure and consistence	Moderate blocky/friable	Favorable category	SPM Table II-4
Other soil notes	Seasonal high water table below 100 cm		
Kfs	658.4 mm/day		
Percolation rate	Not used		
Usable soil depth	100 cm	Shallow trenches specified to ensure adequate vertical separation to the seasonal high water table	
Slope %	20%	Trickle gravity, seepage beds, not allowed	Shallow trenches specified
Slope shape	Slightly concave		Trenches to be contoured to slope shape
Elevation sewer outlet to tanks	downslope to septic tank		
Temperature		freezing potential	ensure lines drain

System Selection Worksheet			
Item	**Value**	**Constraint, opportunity, result**	**Solution and rational**
Key system constraints? Table II-5 and II-6	Not suitable for:	gravity	Insufficient vertical separation (VS), slope >15%
		Alberta at grade	Type 1, not forested
		Seepage beds	Slope >15%
Other soil constraints? Table II-7	None applicable		
Daily Design Flow (DDF)			
Residence bedrooms	N/A		
Residence living area	N/A		
Occupants	Glamping retreat with up to 24 guests (12 tent sites) 75 l/day/person	1800 l/day	SPM Table III-11 – Amenity sites Tent or trailer sites with central comfort station, no sani-dump facility
Other DDF considerations	Up to 26 additional people (50 total) for one time events, such as weddings. Meals will not be prepared on site. 25 l/day/person	650 l/day	SPM Table III-11 Food service and bars, restaurant with preprepared catering.
	Garburator?	No – no additional flow for garburator required.	SPM Section II-5.1.3.2 ***System not designed to accommodate a garburator***
	Typical residential sewage quality?	Yes - no flow adjustments required for sewage quality	
	Sump?	A central outdoor sink pumped to tank	Add 300 l/day for septic tank volume calculation
	water softener?	***System not designed to accommodate water softener flush cycle discharge.***	SPM Section III-5.1.3.3 and III-8.2
	Recreational vehicle waste not proposed. No additional flow required.	***Note: risk of high strength waste and RV holding tank chemical additives.***	***Waste with chemical additives is not to be disposed of in this system.***

System Selection Worksheet			
Item	**Value**	**Constraint, opportunity, result**	**Solution and rational**
Daily Design Flow (DDF)	2450 l/day	2750 l/day for septic tank volume calculation	
Average daily flow over 30 days	1225 l/day		
Vertical and Horizontal Separation, Distribution, and Dosing			
Soil depth and vertical separation (VS) options, distribution, and dosing options	Minimum Dose frequency	Normal, Demand dosing required, minimum 8 times/day at DDF	table II-10 or 11 Note: lines must drain due to risk of freezing
	Table II-14 – for gravity systems	gravity not allowed	Not an option
	table II-15 – for uniform distribution with demand dosing to native soil plus less than 30 cm sand fill		Chosen option. Minimum 60 cm VS in native soil, 60 cm as constructed VS required
	table II-16 - for uniform distribution with timed dosing to native soil plus less than 30 cm sand fill		Possible option
	table II-17 – for sand lined trench/mounds		Possible option.
Horizontal separation constraints, table II-19	well	30 m minimum separation to tanks and dispersal field.	
	Permanent freshwater body	30 m minimum separation to dispersal field and 10 m to tanks.	
	Intermittent freshwater body	15 m minimum separation to dispersal field and 10 m to tanks.	
	water line	3 m minimum separation to tanks and dispersal field	
	Downslope breakout points, footing drains	7.5 m minimum separation to dispersal field	
	property boundary	3 m minimum separation to dispersal field	

System Selection Worksheet			
Item	**Value**	**Constraint, opportunity, result**	**Solution and rational**
Loading Rates, System Sizing			
HLR Type 1	Soil: 27 l/day/m^2	Use the lower value	table II-22 and II-23
	Kfs: 27 l/day/m^2		
Minimum system length or LLR	soil type: 110 l/day/m	Use the lower value	table II-27 and II-28
	Kfs: 110 l/day/m		
Minimum infiltrative surface area (AIS)	90.8 m^2	2450 ÷ 27	AIS = DDF ÷ HLR
Length constraints	Minimum length = 22.3	2450 ÷ 110	length = DDF ÷ LLR
System area configuration	Four 0.9 x 25.3m trenches.	4 center fed trenches. 0.9m trench width 25.6m trench length	Total trench width = Ais ÷ length = 90.8 m^2 ÷ 25.6m = 3.6 m total width
System summary	**Type 1 effluent quality to shallow trenches. Uniform distribution with demand dosing.**		

2.2 Source Control

This system is designed to accommodate a "glamping" retreat with up to 24 overnight guests in up to 12 tent units. The facilities serviced are two shower heads, two toilets, two sinks, plus one central outdoor kitchen sink for overnight guests.

The system is also designed to accommodate one time events (such as weddings) with up to 26 additional people. The total number of system users should not exceed 50. The system is not designed to accommodate meal preparation or clean up.

Note that the system is not designed to accommodate water softener flush cycles. Water softener flush waste could have a negative impact on the system and should be plumbed to a separate disposal system if installed.

This system is not designed to accommodate any other inputs than described above. Discharges or flows from water softener/water treatment flush cycles, hot tubs, spas, floor drains, footing drains, recreational vehicles, untreated appliance condensate, garburators or any other sources of wastewater should be treated and dispersed in a separate system.

3.0 System Installation

3.1 Installer Qualifications

This system must be installed by, or under the oversight of, an Authorized Person as defined by the Sewerage System Regulation (SSR).

The installer should refer to the BC Sewerage System Standard Practices Manual Version 3, Section 6 for detailed installation standards.

Contact SVH Contracting if any changes to these specifications are required or proposed.

3.2 Construction Meetings and Quality Inspections

The owner and installer should review this design with SVH in detail prior to commencing construction. An onsite meeting is recommended to ensure all parties understand the design and the expectations of each other.

Construction quality confirmation by SVH Contracting will be required at the following stages of construction:

- Prior to backfilling, following placement of tanks, preferably immediately prior to and during backfilling.
- After pressure distribution pipe is installed, but before placement of gravel/drain rock over laterals or backfilling. The pump should be installed and able to operate to complete system flushing and testing at this inspection.
- Upon completion of all construction to conduct an as constructed survey, commissioning, and system certification. This is required prior to using the system.

Additional inspections may be required depending on the quality of construction, construction scheduling or installer's experience level.

In addition to the above inspection requirements, an ROWP with installer designation or Professional must certify that all construction meets SPM standards and these design specifications. If a non-registered installer completes the installation work, SVH must be present during all installation activities to oversee the work.

The installation should be scheduled in consultation with SVH Contracting to ensure availability for inspections.

3.3 System Component Installation Specifications

3.3.1 Sewer and effluent transport lines

- Gravity sewer and effluent transport lines: 4" SDR or PVC, pressure lines to be Schedule 40 PVC or HDPE with properly bonded joints.
- Ensure a continuous minimum grade of 2% for all piping except where specified otherwise.
- Use fittings with a change in direction of not more than 45^{0}, or use sweeping 90^{0} fittings, on all buried pipes.
- All pipe and tank connections to be properly supported on compacted material.
- Place cleanouts where the sewer line exits the building, spaced a minimum of 15 meters along the length of gravity pipe and where indicated on the construction drawings.
- Ensure the system vents freely from the pump chamber to the facility vent system.
- Ensure the sewer piping exits the building no deeper than 45cm (18") (also dependant on site terrain) to minimize the burial depth of the tanks.

3.3.2 Septic tank(s)

- Minimum working volume:
  - = (DDF + addition for pumped effluent) x 3
  - = (2450+300) x 3
  - = 8250 l
  - = 1815 IG
- Install one single chamber 1000 IG and one single chamber 800 IG Canwest plastic septic tanks in series.
- Backfill all tanks with thoroughly compacted material. Consider using bedding sand or pea gravel if native soils are difficult to compact adequately.
- Install a Polylok effluent filter on the second tank outlet.
- Install a vent bypass around the filter on the outlet of the second tank.
- Provide access to grade for tank access points.
- Install the tanks with the top as close to the finished grade as possible. Do not exceed the manufactures standards for maximum burial depth.
- Direct surface water drainage away from the tanks.
- Complete a watertightness test on all tanks, including risers and riser penetrations.

3.3.3 Flout

- Install one 130 imperial gallon flout dosing tank, Premier Plastics Model FLT130.
- Ensure the outlet of the Flout is at least 10 feet in elevation above the distributing valve. More elevation difference in better, maximise the amount of elevation difference.
- Target dose volume from the flout: 306 liters (67 IG)/dose. Flout to be calibrated to this volume by the manufacturer.
- Install a dose counter on the Flout per the manufacturer's instructions.
- Install the flout per the manufacturer's instructions.
- Use grommets to ensure all tank or riser penetrations are sealed.
- Provide access to grade for tank access points.
- All penetrations and conduit leaving any tank must be sealed gas and watertight.

3.3.4 Distribution system

3.3.4.1 Trenches

- Protect the dispersal field areas from machine travel or other compaction or disturbance before and during construction.
- Trench dimensions: 8 trenches, 0.9 x 12.8 meters (3 x 42 feet) each.
- Ensure a minimum trench spacing of 0.9 meters (3 feet).
- Excavate the trenches along the contour of the land, ensure the base of the trench is scarified, do not smear with a cleanup bucket, or compact with foot or other traffic.
- Do not excavate more than 40cm in any area of the trench. Trenches can curve and can be at different elevations.
- Level the infiltrative surface to within 1.25 cm side to side and within 5 cm in 30 m (0.2%) lengthwise downslope in the direction of flow.
- Install two monitoring wells within the drain field as shown in the construction drawings.
- Place a minimum depth of 15 cm of washed drain rock over the infiltrative surface. Once laterals are built, place an additional 5cm over the laterals. Drain rock should be ½ to 2 ½" and have less than 1% by weight passing the #200 sieve and without silt or clay coating.

3.3.4.2 Pressure distribution system

- Force mains: 2.0" schedule 40 PVC extending from the flout to the distribution valve.
- Ensure the force main drains to the dispersal field, minimum 2% continuous grade.
    - Install a Orenco V4404A distributing valve with 1.25" inlets and outlets
    - Install the distributing valve at the high point in the dispersal field.
    - Connect force main to the distributing valve inlet.
    - Ensure the distributing valve drains to the dispersal field between doses.
    - Split the flows from each distributing valve outlet to two laterals.
    - Place a 1.25" ball valve at the start of each lateral.
    - Place the distributing valve in a 24" Polylok riser, and lateral valves in Rainbird Maxi Jumbo valve boxes.
- Laterals:
    - Eight – 12.8 m (42 ft.), 1.25" schedule 40 PVC laterals.
    - Space the laterals at least 1.8m (6') apart in the center of each trench.
    - Drill 21 – 3/16" orifices per lateral, spaced 0.61m (2') apart.
    - Construct lateral cleanouts/flush access at the distal end of each lateral.
    - Place lateral cleanouts in 6" valve boxes.
    - Orient the orifices down; equip all orifices with orifice shields.
    - Bed the laterals in washed drain rock as per above.
    - Place lightweight nonwoven filter fabric over the drain rock.

3.3.5 System cover and landscaping.

- Cover the system with 15 to 30 cm granular soil. Cover soil should be no finer than a loam. If no suitable native material is available, import loamy sand material.
- Consult SVH to approve the cover material prior to purchase or placement.
- Ensure all cleanouts, valves, tank accesses and observation wells are accessible within valve boxes or risers set flush with the finished grade.

- Crown the system cover material to divert surface drainage away from the system. Ensure surface drainage cannot pond anywhere around the system.
- All disturbed areas should be vegetated by the owner with grass or other shallow rooted trees or shrubs.

4.0 Statement of General Conditions

Reliance on Provided Information - SVH Contracting Ltd. (SVH) will rely on the accuracy and completeness of information provided by its client, the homeowner, and by other professionals. We are not responsible for any deficiency in our reports that might result from a deficiency in this information.

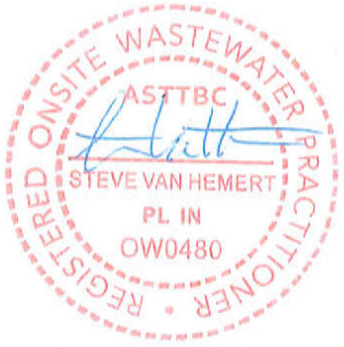
Standard of Care - We exercise a standard of care consistent with that level of skill and care ordinarily exercised by members of the profession currently practicing under similar conditions.

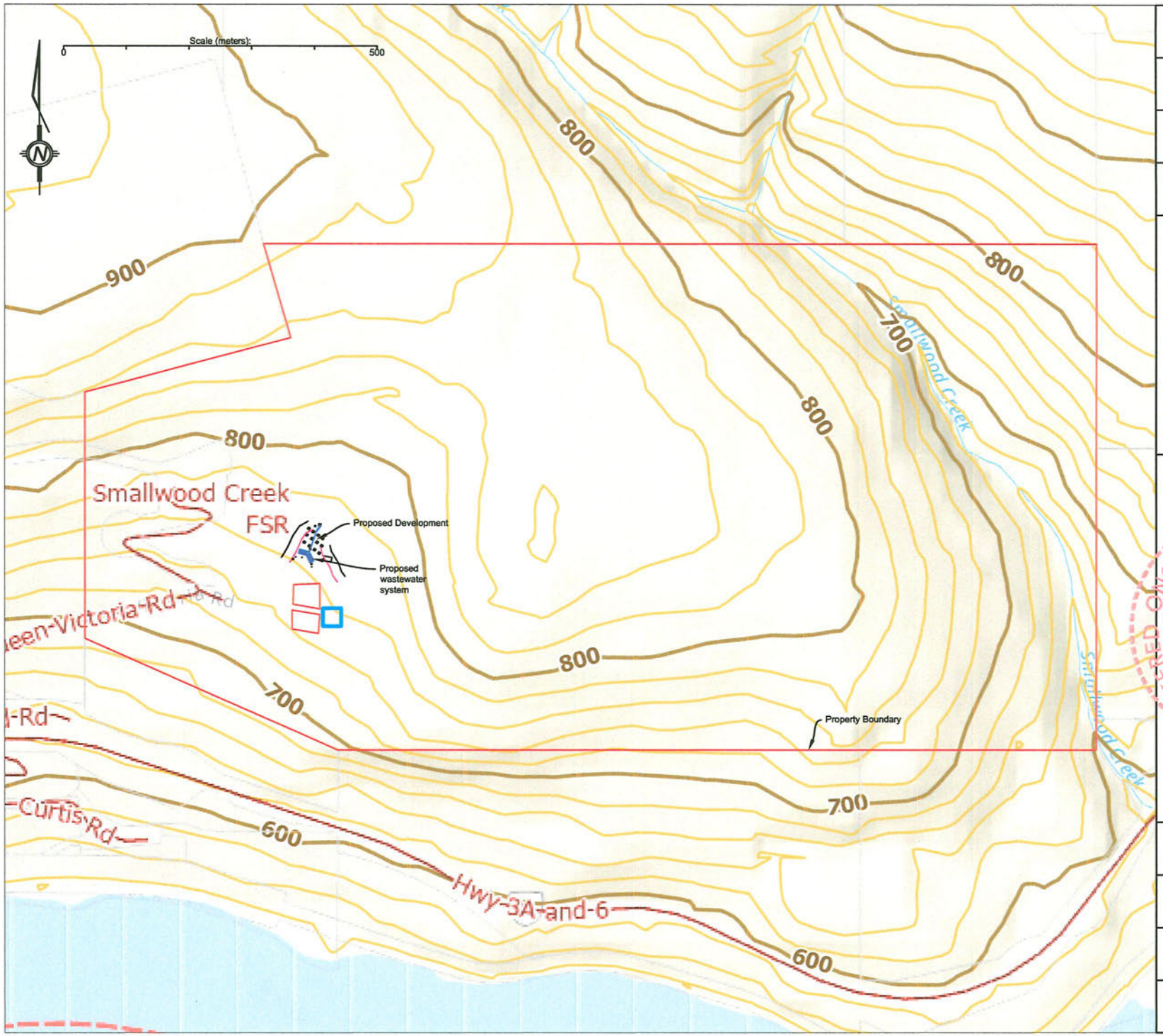
Review - We recommend that our client engage SVH to review all forms, documents, and reports to discuss any questions our conclusions and recommendations.

Limitation of liability - In all cases, the liability of SVH Contracting Ltd and/or those under the direction of SVH Contracting is limited to the fees charged. By accepting and using this document, the client and owner accept that SVH Contracting Ltd and/or those under direction of SVH Contracting Ltd.'s liability is limited in this way.

5.0 Attachments

- Site Plan
- Construction Drawings
- Flout calculation
- Site and Soil Evaluation





Onsite Wastewater System Design

Site Plan

5254 Queen Victoria Road, Beasley

District Lot 8433, Land District 26, Except Plan 1224 & Plan 9232, PCL A REF PL 67964I, Managed Forest 0531

ONSITE WASTEWATER PRACTITIONER · REGISTERED
ASTTBC
STEVE VAN HEMERT
PL IN
OW0480

For specification detail see design document

May 26, 2021

Drawn By:
Steve Van Hemert, ROWP

SVH Contracting Ltd

Onsite Wastewater System Design

Construction Plan

5254 Queen Victoria Road, Beasley

District Lot 8433, Land District 26, Except Plan 1224 & Plan 9232, PCL A REF PL 67964I, Managed Forest 0531

REGISTERED ONSITE WASTEWATER PRACTITIONER
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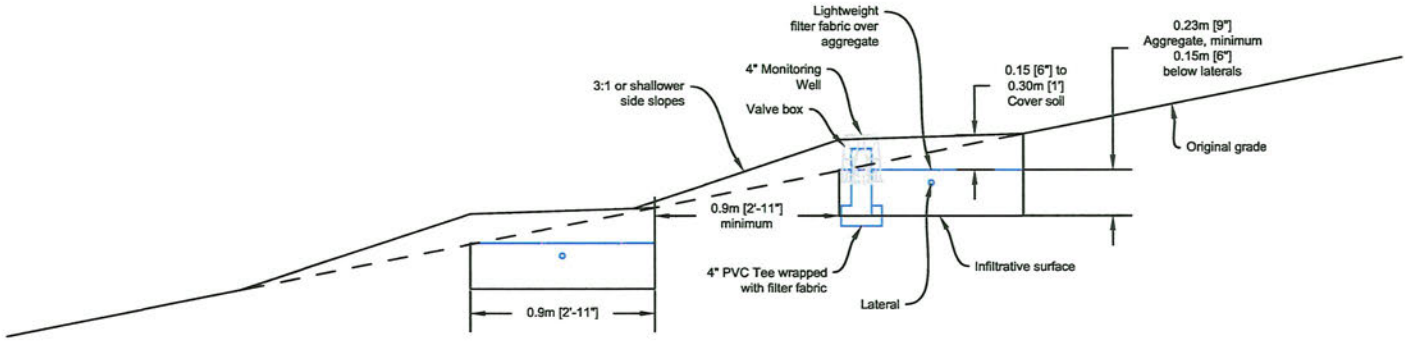
For specification detail see design document

May 26, 2021

Drawn By: S. Van Hemert, ROWP

SVH Contracting Ltd



Trench Profile (typical)

Tanks Profile

Onsite Wastewater System Design

Construction Drawings Profile Views

5254 Queen Victoria Road, Beasley

District Lot 8433, Land District 26, Except Plan 1224 & Plan 9232, PCL A REF PL 67964I, Managed Forest 0531

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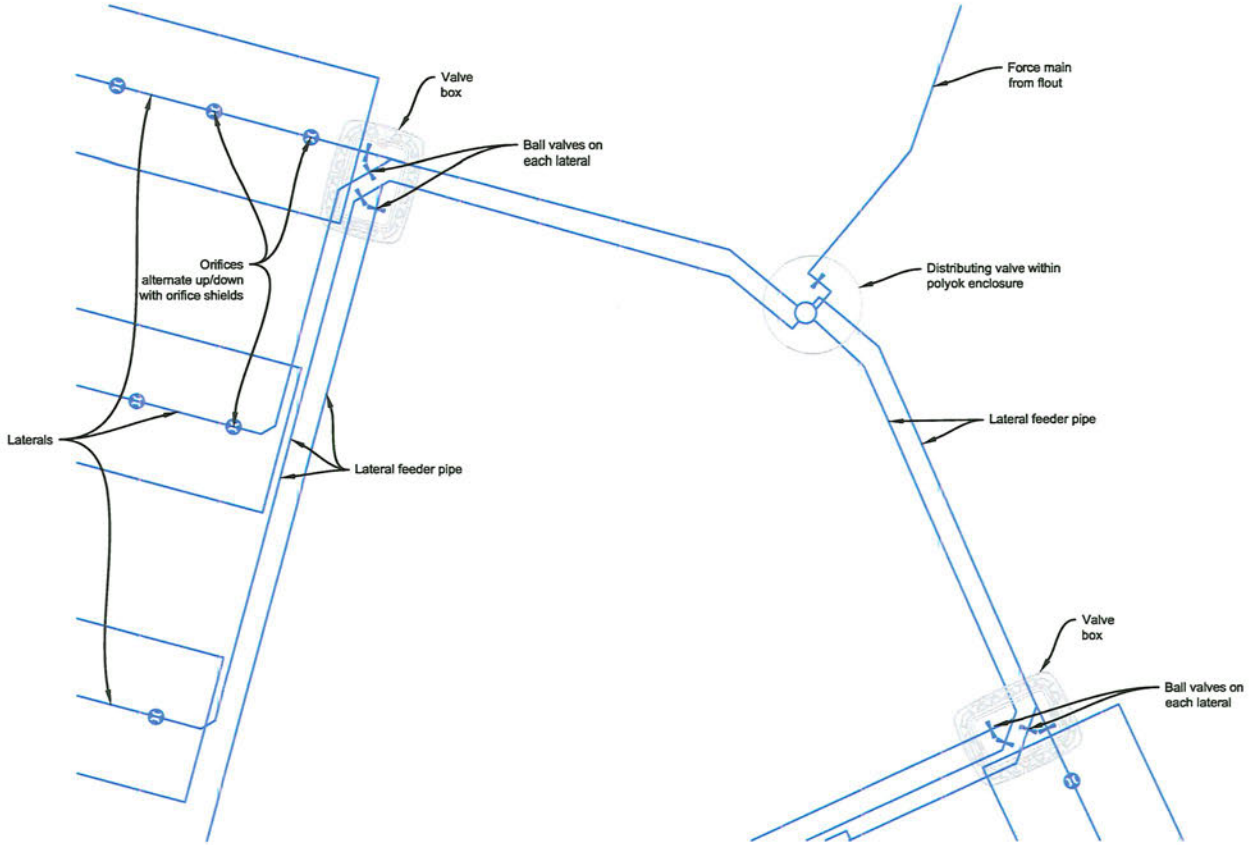
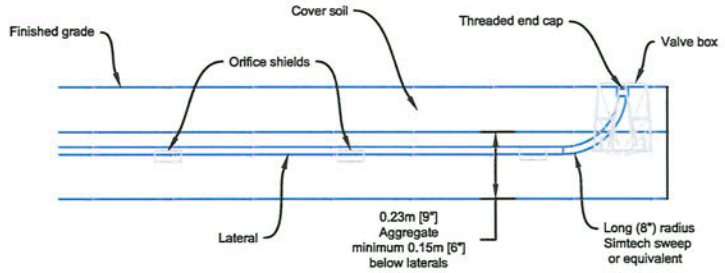


Distributing and Lateral Valve Detail



Lateral Cleanout Detail

Onsite Wastewater System Design

Construction Drawings Detail Views

5254 Queen Victoria Road, Beasley

District Lot 8433, Land District 26, Except Plan 1224 & Plan 9232, PCL A REF PL 67964I, Managed Forest 0531

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For specification detail see design document

May 26, 2021

Drawn By: Steve Van Hemert, ROWP

SVH Contracting Ltd

PREMIER PLASTICS

GRAVITY POWERED PRESSURE DOSING CALCULATOR FOR SEPTIC FIELDS

Before using this program read Guideline document

Project Name and Date : 5254 Queen Victoria Rd, Beasley

Designer: S. Van Hemert

SYSTEM INPUTS

Static head (vertical) available at site (ft.) (Mid level in dosing tank to field inlet manifold)	9.56
Total number of orifices in field (max.150)	42
Diameter of orificies (inches)	3/16
Minimum squirt height required (ft.)	3.00
Total length of transport pipe - dosing tank to field manfold	184

Include equiv. length of fittings (ft.): Pipe equiv. 90 elbow - 8' 45 elbow - 3' Coupling - 6'

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BASE SYSTEM

(includes 30 ft. of transport pipe) (Refer to www.premierplastics.com for actual test results)

Transport pipe diameter of base system	2"Pipe	3"Pipe	4/2" Pipe*
Static head required for min. squirt height (ft.)	6.28	6.16	6.36

(Derived from experimental data)

EXTENDED TRANSPORT PIPE (OVER 30 ft.)

Minimum total US gallons per minute	32.53
Diameter of extended transport pipe (inches) (try options)	2.00
Friction head loss ft. per 100ft. of transport pipe (Ref.)	2.13
Additional friction head loss for extended transport pipe (ft.)	3.28

OUTPUT**

Transport pipe diameter of base system	2"Pipe	3"Pipe	4/2" Pipe*
Static head required for base system (ft.)	6.28	6.16	6.36
Additional static head (friction loss) for extended transport pipe (ft.	3.28	3.28	3.28
Total static head required for minimum squirt height (ft.)	9.56	9.44	9.64
Net excess static head available (ft.) (-) negative (Try another squirt height or pipe size (+/-) if not close to zero)	+0.00	+0.12	-0.08

For maximum squirt height potential this number would be zero.

*2" pipe - last 4 ft. of vertical fall **Valid only for fully flooded (vented) flow in transport pipe

This guideline was developed to the best of our knowledge and is not intended as a substitute for evaluation performed by a registered industry professional. Nominal accuracy: ± 15%

Site and Soil Evaluation

Job:	5254 Queen Victoria Road	**Completed By:**	Steve Van Hemert, ROWP
Date:	April 29, 2021	**Vegetation:**	Grass (pasture)
Slope:	20%		

REGISTERED ONSITE WASTEWATER PRACTITIONER · STEVE VAN HEMERT · PL IN · OW0480 · ISTTBC

Soil Profile Description

TP#	Depth (cm)		Matrix Colour	Texture	CF %	Structure		Consistence	Roots		Mottles		Moisture Seepage
	From	To				Grade	Type		Quantity	Size	Quantity	Contrast	
1	0	20	reddish brown	sandy loam	<5	strong	blocky	loose	many	fine	-	-	-
	20	120	brown	sandy loam	<5	strong	blocky	friable	common	fine	-	-	-
	120	150	light brown	sandy loam	<5	strong	blocky	friable	few	fine	-	-	moist
	150	165	light brown	sandy loam	<5	moderate	blocky	friable	-	-	few	moderate	moist
2	0	20	reddish brown	sandy loam	<5	strong	granular	loose	many	fine	-	-	-
	20	60	dark brown	sandy loam	<5	strong	granular	loose	common	fine	-	-	-
	60	100	brown	sandy loam	<5	strong	blocky	friable	few	fine	-	-	moist
	100	130	brown	sandy loam	<5	moderate	granular	friable	-	-	-	-	seepage
2	0	20	reddish brown	sandy loam	<5	strong	granular	loose	many	fine	-	-	-
	20	60	dark brown	sandy loam	<5	strong	granular	loose	common	fine	-	-	-
	60	100	brown	sandy loam	<5	strong	blocky	friable	few	fine	-	-	moist
	100	130	brown	sandy loam	<5	moderate	granular	friable	-	-	-	-	seepage

Permeability Test Summary:

Test#	Depth (cm)	Rate of Fall (mm/minute)	Flow Rate, Q (ml/day) (rate of fall x 8.22)	Soil Factor, F (SPM Appendix 8.3.3)	Kfs, mm/day (Q xF)
1	40	10	82.2	8.9	731.6
2	50	9	74.0	8.9	658.4
3	60	3.5	28.8	8.9	256.1
4	35	5	41.1	8.9	365.8

Note that test #3 not used as it is not representative of the soil horizon used for the infiltrative surface. 2nd slowest rate used, 658.4 mm/day.