ANCAM
MANAGEMENT &
ENGINEERING CONSULTING

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PROJECT MEMO

Project	**P3277 – Ferox Winery Septic System Alteration Memorandum**
Date:	August 14, 2025
Attention:	Fabian Riens, Owner, Ferox Winery
Copy:	Robert Smit, Planner, NPG Planning Solutions
Pages:	8 pages total
From:	Rahul Pillai, Project Coordinator
	Kevin Clark, P. Eng., Engineering Manager
Subject:	Proposed sewage effluent system upgrades at Ferox Winery

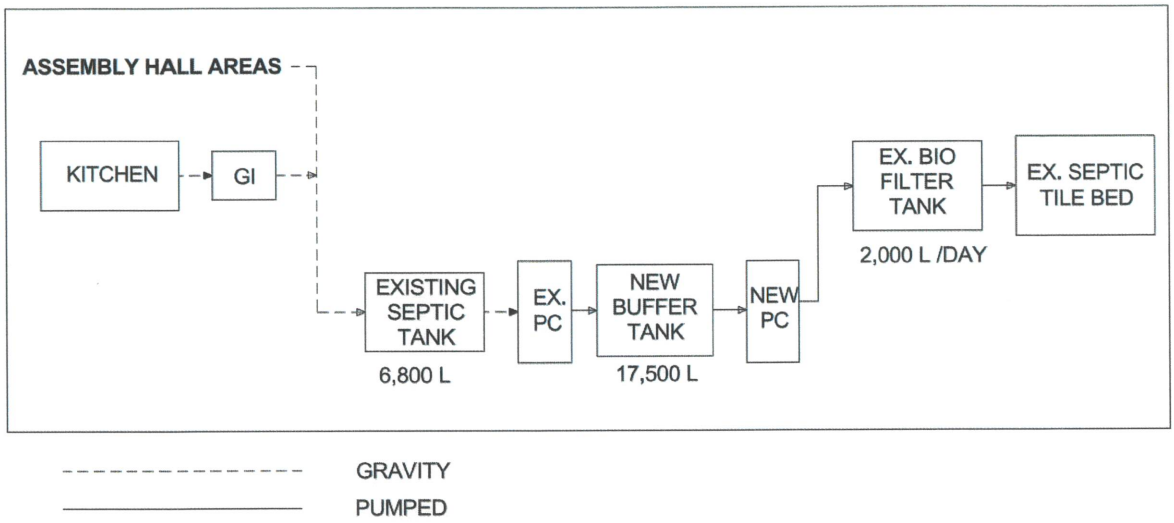
Good day, Fabian:

Ancam Management & Engineering Consulting, Professional Services Division of Ancam Solutions Company Ltd. (ANCAM) was contracted to complete desktop review and assessment of the septic systems in place at the Ferox Winery (Ferox) located at in Niagara On The Lake, ON. During the course of our review and discussions with the Niagara Region about the estate winery status and other Ferox future plans, we suggested that an expansion of the existing system may provide options for Ferox for future operations.

This memo summarizes our proposed sewage effluent system upgrades which are noted as follows:

- The addition of instrumentation to measure effluent flows from the existing pump chamber including a control system "monitor" that would be installed in a utility room at Ferox to show effluent flow rates from the buildings into the accumulation tank, accumulation tank levels and effluent flow rates from the accumulation tank to the bio-filter treatment system and dispersion tile bed.
- The addition of a buried accumulation tank capable of supporting vehicular traffic which will be a precast concrete tank with a capacity of approximately 17,500 litres. This large tank has been selected to allow for flexibility in operations where additional patrons may come to Ferox on occasion without the need to add portable washrooms or the need to pump out existing tanks. This tank will also provide assurance in the event that the existing bio-filter treatment system or effluent dispersion bed require repair by holding a large volume of effluent (up to 8 days of normal effluent flow at 1,980l/d) and for effluent to be pumped directly from the accumulation or pump chamber tank.
- A new direct buried effluent pump chamber equipped with instrumentation to monitor effluent flows from the accumulation tank into the bio-filter treatment system.

We have prepared a revised effluent system schematic diagram of proposed upgraded system for clarification as shown below:



Proposed Alteration for Ferox Winery Effluent System:

We have proposed the addition of an accumulation tank to the existing Ferox system, which will be able to accommodate larger gatherings without risk of overwhelming the existing sewage effluent systems in place at Ferox.

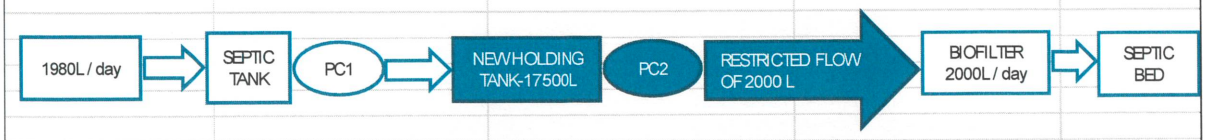
For this memorandum, we have defined "normal" effluent flows from Ferox operations as follows:

Planned Item	Limits	Count	Planned Effluent Flows
Employees (office /factory)	75 litres/day	2	150
Assembly hall patrons	36 litres/person	20	720
Retail space	4 sq. m	40	160
Water closet	950 litres/day	1	950
		Total Flows	**1,980 litres per day**

The addition of the 17,500L accumulation tank will allow larger gatherings at Ferox by allowing sewage effluent to collect and be held for in-site treatment by existing sewage effluent treatment systems, consisting of a bio-filter treatment system followed by dispersion into the tile bed at a rate of up to 2,000 litres per day.

The chart below shows that the sewage effluent produced from a gathering of an additional 140 patrons to the normal 20 patrons would require just over 2.5 days to process or to lower effluent levels in the tank to a minimum tank effluent level.

NORMAL & MAXIMUM OPERATION OF FEROX SEPTIC SYSTEM



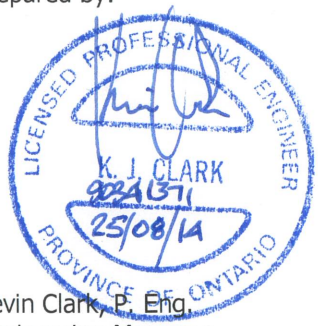
NO OF ADDITIONAL PATRONS	PLANNED EFFLUENT FLOW @36 L/ day	RESTRICTED FLOW TO BIOFILTER- 2,000L	ACCUMULATION TANK- 17,500 L	DAYS TO RECOVER
NORMAL OPERATIONS	1980	2000	-20	0
40	3420	2000	1420	0.71
60	4140	2000	2140	1.07
80	4860	2000	2860	1.43
100	5580	2000	3580	1.79
120	6300	2000	4300	2.15
140	7020	2000	5020	2.51

It is the opinion of Ancam Management & Engineering Consulting, Professional Services Division of Ancam Solutions Company Ltd. that these sewage effluent system upgrades at Ferox Winery will ensure flexibility and longevity to existing systems. The effluent volumes produced by Ferox will be able to be monitored and managed, and Ferox management will be able to plan for operations events and for maintenance with these systems in place.

If you have any questions or comments regarding this memo, please do not hesitate to contact the undersigned below directly at 905-339-0634.

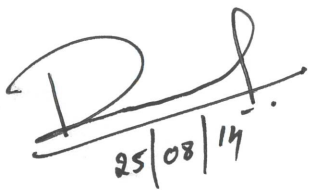
ANCAM MANAGEMENT & ENGINEERING CONSULTING*

Prepared by:



Kevin Clark, P. Eng.
Engineering Manager

Reviewed by:



Rahul Pillai
Project Coordinator

EXHIBIT 1

Supplier Shop drawing for the New Buffer Tank

2 Pages Total

19,600 LITRE PRECAST CONCRETE WATER HOLDING TANK MODEL H19.6H

WILKINSON HEAVY PRECAST LIMITED
DUNDAS, ONTARIO 1-800-263-8503
www.wilkinsonheavyprecast.com

CLASS H - HEAVY CONSTRUCTION
CONSTRUCTION DETAILS *

Concrete: 35 MPa at 28 Days, 5 to 8% Air Entrainment.

Reinforcing: 10 M bars at 125 mm centres each way in floor and walls.
15 M bars at 150 mm centres each way in top slab.
Eight extra 15 M bars around roof access opening.
Minimum cover over reinforcing steel - 25 mm.

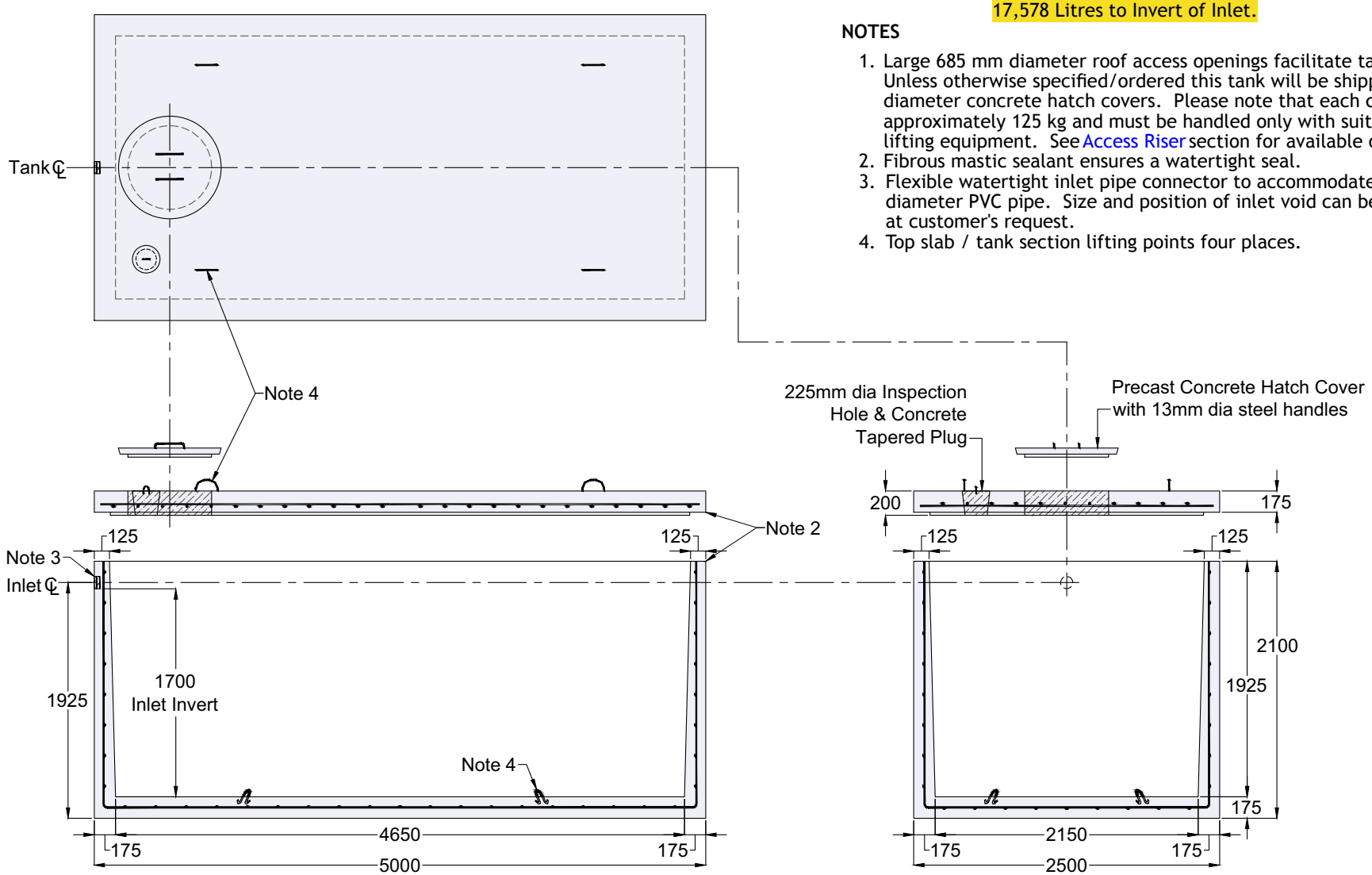
Weight:

Top Slab	6065 kg
Tank Section	15,575 kg
Total	21,640 kg

Actual Capacity: 10,340 Litres per Vertical Metre.
19,646 Litres to Underside of Roof Slab.
17,578 Litres to Invert of Inlet.

NOTES

1. Large 685 mm diameter roof access openings facilitate tank maintenance. Unless otherwise specified/ordered this tank will be shipped with 840 mm diameter concrete hatch covers. Please note that each cover weighs approximately 125 kg and must be handled only with suitable mechanical lifting equipment. See Access Riser section for available options.
2. Fibrous mastic sealant ensures a watertight seal.
3. Flexible watertight inlet pipe connector to accommodate 100 mm diameter PVC pipe. Size and position of inlet void can be modified at customer's request.
4. Top slab / tank section lifting points four places.



*Product designed for a **Maximum 1.5 Metre** burial over the top slab in firm soil beneath an area of passenger vehicle parking.

Dimensions in mm
N.T.S.

For recommended installation proceedures refer to Wilkinson Installation Guidelines.

WARNING! IMPROPER INSTALLATION ESPECIALLY IN UNSTABLE SOIL CAN RESULT IN THE STRUCTURAL FAILURE OF THIS PRODUCT

April 20th, 2017

EXHIBIT 2

Instrumentation Data Sheets - Flow Meter and Level Sensors

3 Pages Total

Flygt ENM-10 liquid level regulators

TRIED-AND-TRUE SIMPLICITY

FLYGT
a xylem brand

MagFlux®

3.05

ELECTROMAGNETIC FLOW METER

General

MagFlux® Electromagnetic Flow Meters deliver very stable and highly accurate flow measurements in conductive liquids.

MagFlux® Flow Meters have no moving parts to create hydraulic influence on the flow, use a well-proven technology developed by MJK and communicate using a standard protocol.

MagFlux® Flow Sensors are available in sizes ranging from DN 15 to DN 2000*, with standard construction lengths and connections. The MagFlux® Flow Meter, which makes the calculations of the flow, can be installed either with the converter mounted on the MagFlux® Flow Sensor, on a wall or mounted in a panel.

MagFlux® Q is a special edition of MagFlux® produced in composite materials and particularly suitable for salt water and low flowrate measurements. Its construction without external metal parts makes MagFlux® Q the perfect solution for installations where there is corrosion. MagFlux® Q is available from DN50 to DN150.

Features

- One graphic display can operate up to four MagFlux® Flow Meters.
- Intuitive menu structure with easy navigation.
- Built-in datalogger with the display.
- Large dynamic measuring range with an accuracy of up to ±0,25%.
- Two dynamic batch counters and password protection.
- Counters and pulse output with or without reset.
- 4-20 mA output for flow in one or both directions.
- Detection of empty pipe and automatic electrode cleaning.
- Full bore bi-directional sensor.
- Modbus® communication is utilized between the display and flow converter and to other external devices.

Features - MagFlux® Q

- Low weight.
- Sensor in ABS plastic and Hastelloy C electrodes.
- Ideal for applications with saline water, e.g. aquaculture.
- Fully integrable with classic MagFlux® sensors and converters.

Applications

MagFlux® is used to measure and log conductive fluids (drinking water, wastewater and process fluids) in both directions in closed and possibly pressurized pipe systems.

In addition, **MagFlux® Q** is used for installations with saline and/or seawater (even heated). And the high precision at very low speed makes MagFlux® Q perfect for district wells where night flow measurement can eliminate water loss even at very small leaks.

*) *Does not apply to MagFlux® Q.*

DATASHEET

EN 3.05 MAGFLUX DATASHEET 2102

mjk a xylem brand