Econocycle

AERATED WASTEWATER TREATMENT SYSTEMS

Proposal

SUPPLY SEWAGE TREATMENT PLANT

For

"Community Hall"

682 Castlereagh Road,

Agnes Banks

Attention: Mr. Rick Shah

Email: rickshah74@gmail.com

Date 2th August 2017

Table Of Contents:

1. Quotation Qualification

The quotation price and details as submitted are based on information supplied by your records, Australian Standards, and influent and current effluent qualities and quantities. The quotation price is subject to any increase in material or labour costs due to time lapse thirty days from date of this quotation and the signing of the contract.

2. Project Details

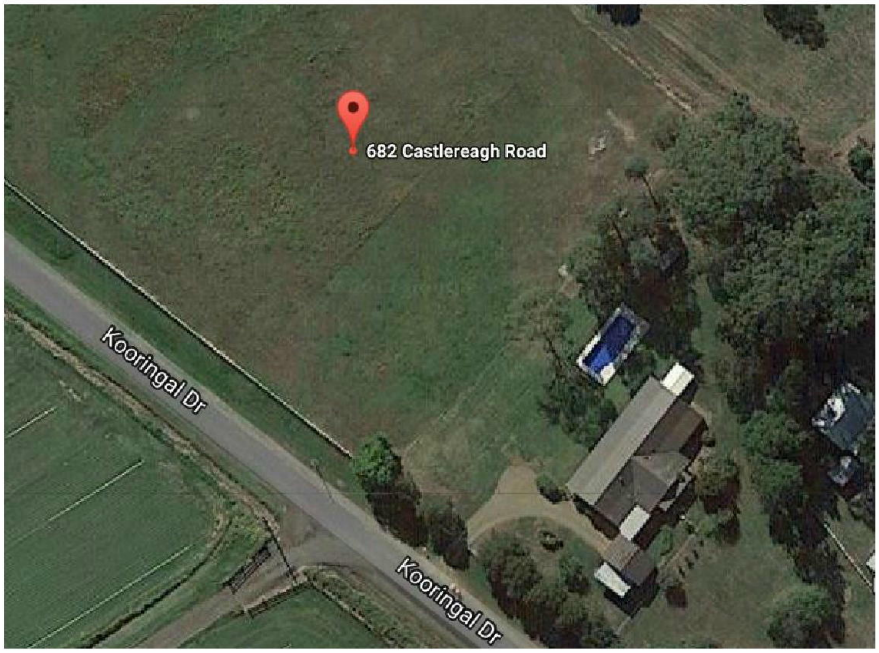
Supply new Sewage Treatment Plant (STP) or Waste Water Treatment Plant (WWTP) to treat the sewage from a variety of buildings outlined.

Flow rates determined by Envirotech Ref: 17-4422 version B.

Parameter	Influent	Effluent
Flow Rate	Controlled 1750 litres per day	
BOD5 (mg/l)	150	<10
TSS (mg/l)	150	<10
E-Coli (ORG / 100ml)	10>	<10
Free Chlorine	-	<2ppm

The customer acknowledges that the influent load does not exceed those parameters as outlined in clause 3 Site information herein.

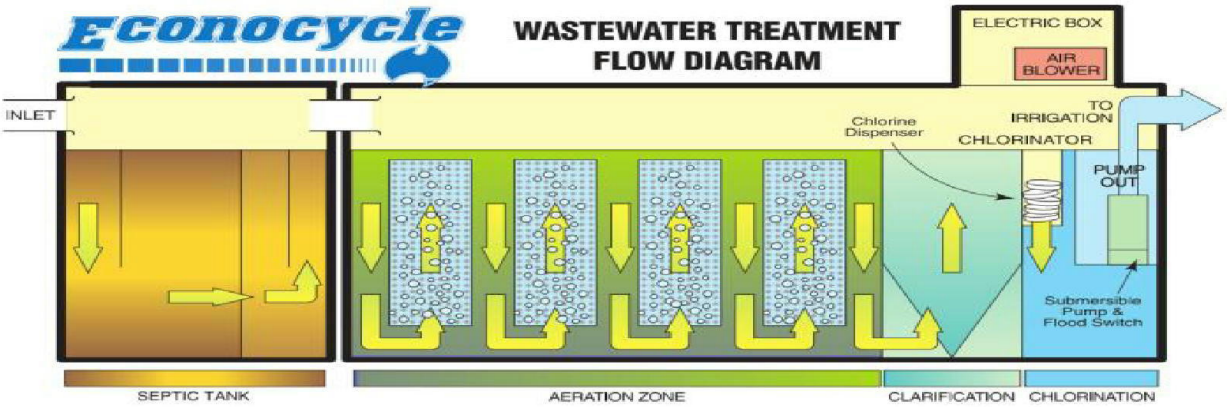
Note: There must be no grease or oil products enter the treatment unit.



3. Treatment Process

The treatment process will consist of the following stages:

- Flow Balance management / storage.
- Primary Chamber for anaerobic digestion and sludge management / storage.
- Aeration Chamber for biological treatment.
- Clarification Chamber for sludge settling and transfer
- Disinfection Chamber
- Pump Chamber for storage prior to disposal



Flow Balance Tank/s

Water enters via the existing dwelling and proposed community hall. The high peak load effluent from the high demand weekend use is stored in these tanks. The effluent is then pumped into the treatment section at a controlled and timed flow rate of 1,750 litres per day.

Primary Chamber

Influent enters the chamber via the source whereby scum and solids capable of settling are separated from the raw influent. Primary treated effluent flows through a transfer port to the aeration tank. This tank also acts as a storage vessel for sludge return from the clarification settling chamber.

Note: This tank will require occasional pump outs.

Aeration Chamber/s

Water enters via the flow balance tank. Oxygen is introduced into this chamber via an air pump to create an environment for aerobic bacteria and other organisms to consume the organic matter present. The aeration tank is designed in a manner to help prevent short circuiting of the wastewater to ensure extended and proper aeration time. Growth media is also present in the tank to support the bacterial growth.

Clarification

The clarification chamber is designed as a settling out prior to disinfection. The rate of fall of particles is greater than the flow rate / uplift. The settled sludge in the base is transferred back to the primary stage where it is accumulated with the septic sludge and scum.

Disinfection

Disinfection is achieved through chlorine contact. Approx. disinfection time of 0.5 hour.

4. Acceptable Influent Load

As per general information supplied

Oxygen Demand

BOD5	<150 mg/L

Other

Suspended Solids	<150 mg/L

5. Specification of Proposed STP

The treatment comprises of

Flow Balance	**17,000 litres**
Primary Treatment	**7,000 litres**
Aeration Treatment	**5,000 litres**
Clarification / Settling	**500 litres**
Disinfection / Pump well	**500 litres**

Aeration Supply

Air will be supplied by way of aeration blowers capable of delivering 200 litres per minute.

Irrigation Pumps

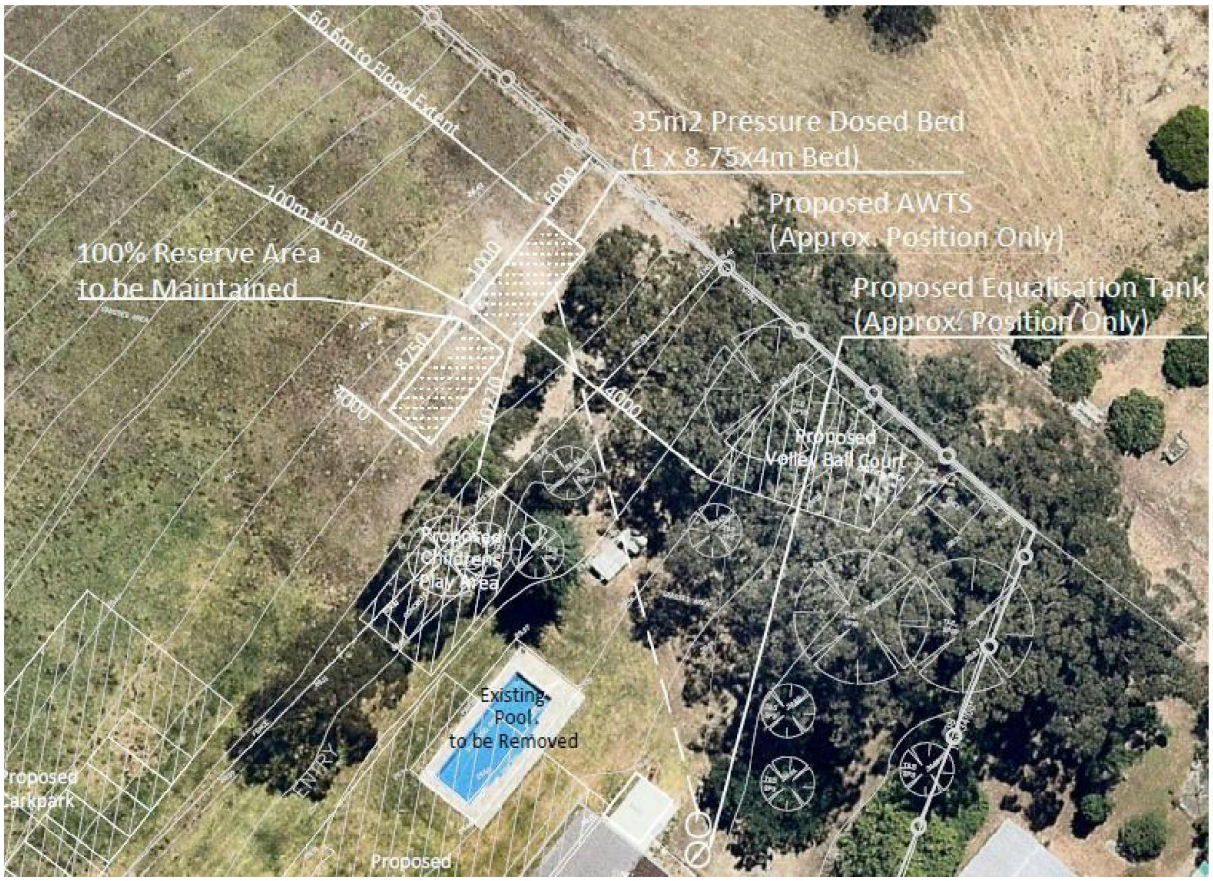
The treated effluent will be disposed of by way of single phase 32 metre head pressure effluent pump. The pump will be operated automatically and should a fault be detected an alarm will be activate.

Electrical Control Unit

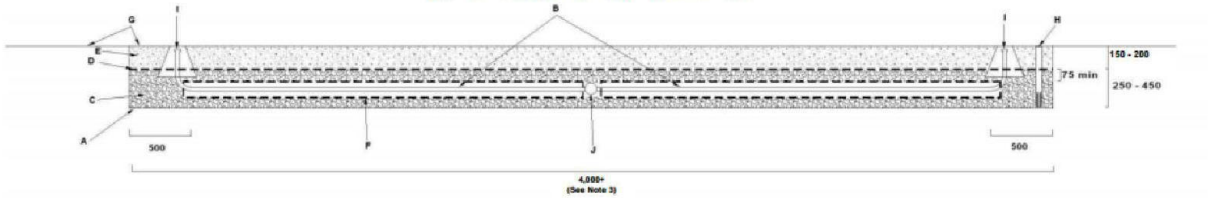
A fully automatic control unit will power and monitor the system and activate an alarm should a fault be detected. The alarm system comprises of a panel in the building. An optional flashing strobe to the top of the control box is recommended in this circumstance. “Back to base” monitoring can be fitted as an option if required.

Pressure Dossing Beds

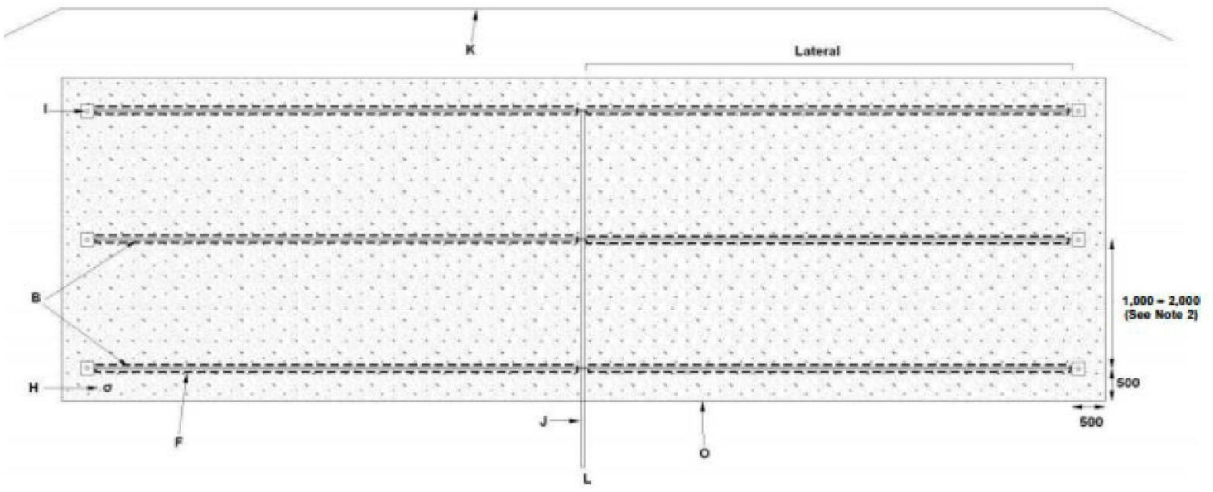
An area below the tanks as set out on the plan in the report. This work is not included in this proposal and to be done by others. Filters, vacuum valves and flush valves are required.



Cross Section: Pressure-dosed Bed



Plan View: Pressure-dosed Bed



6. Design Effluent Quality

A properly maintained plant produces treated effluent with the following characteristics as a minimum standard:

BOD5	<10 mg/litre
Suspended Solids	<10 mg/litre
Faecal Coliforms	<10cfu/100ml

7. Quotation Price

Our quotation price for the supply and commission of the Sewage Treatment Plant to suit your projects is:

- Quotation price for supply and commission of the Sewage Treatment Plant is $24,500.00 Including GST
- Pressure dosing beds. By others.
- Plans for council $850.00. This amount will be deducted from the purchase price and is non-refundable.

This price is subject to change pending council approval requirements or any changes to design criteria, along with the terms and conditions. The purchase price comes with a twelve months service agreement from the commissioning date.

8. Works by Customer

The following items are not included in the tender price and costs are to the customer:

- Site survey if required
- Excavation and removal of excess spoil
- Supply of electricity to Plant Control Box
- Supply of man proof fencing around plant if required
- Temporary fencing during construction
- Clearing of site if required
- Effluent Disposal Area.
- Government approvals expenses and payment of fees as required
- Geotechnical and soil testing and reports if required by relevant Authorities
- Effluent Disposal area requirements.

9. Payments

Payments to Eco-Septic Pty Ltd.

Plans $850.00 Non-refundable.

30% on placement of order / 60% prior to delivery / 10% on final commissioning

10. Construction Period

It is estimated that 3 working weeks are required to construct and commission the system. This is dependent on Authority approval and signed agreement, weather, industrial disputes delivery of plant items from suppliers which are all beyond the company's control.

11. Summary

Econocycle is an industrial leader in design and manufacturing of packaged Sewage Treatment Plants and all our plants are constructed to highest quality. All WWTS designs are oversized to accommodate small expansion and peak hydraulic loads.

Thank you for the opportunity in providing this proposal quotation for your consideration and if you require any additional information please do not hesitate to contact me.

Yours Sincerely

David Black

David Black

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Warragamba NSW 2752

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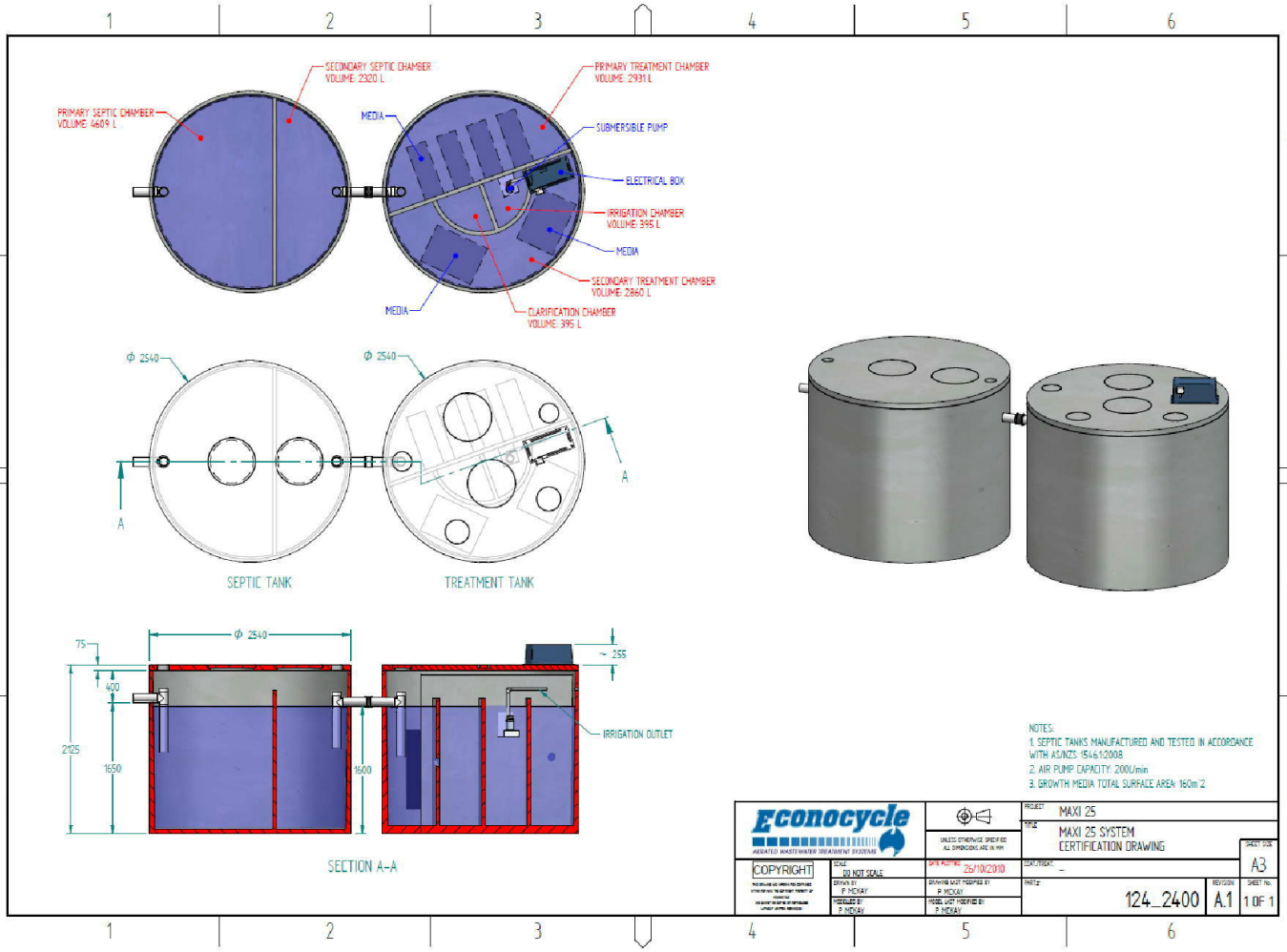
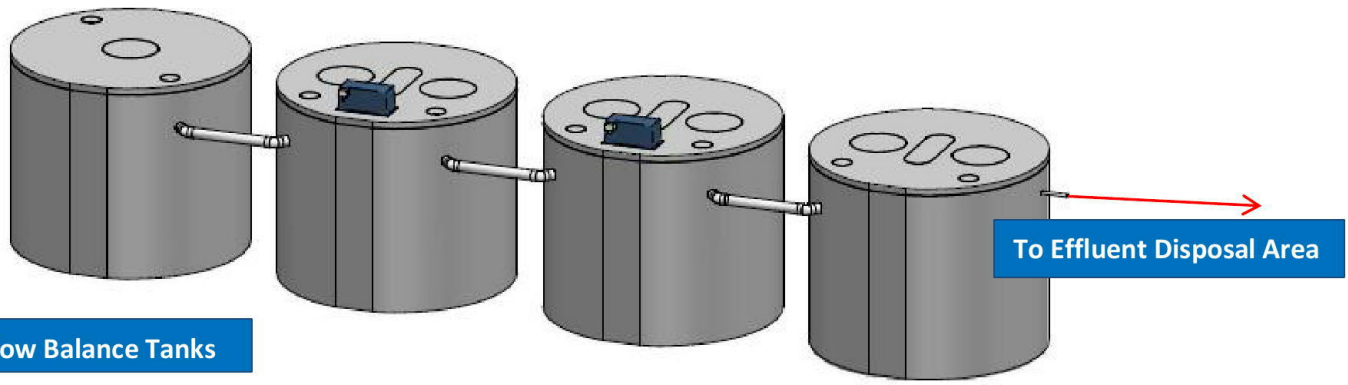
Typical Tank Layout

Treatment Section Maxi 20





Flow Balance Tanks

To Effluent Disposal Area

Econocycle Maxi 20