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18690  
IK Brown  
(07) 224 2654

15th March, 1990

The Director  
Biocycle Queensland  
PO Box 13  
TOOWONG, QLD 4066.

Dear Sir,

re: Authorisation for Biocycle "HUNTER" 5100L capacity Household Sewerage Treatment Plant

With reference to our letter of 28th February it is advised that the Conditions of Authorisation for the above plant have been amended in several minor respects. The date of authorisation, the 28th February, 1990, remains unchanged.

The amended Conditions of Authorisation are:

The Biocycle " HUNTER " 5100L Household Sewage Treatment Plant is authorised for use within the State of Queensland subject to the following conditions:

1. The plants, when installed, shall continue to perform satisfactorily, producing an effluent to comply with the following standard when tested in accordance with procedures recommended by the Commission:
  - (a) The 5 day Biochemical Oxygen Demand shall not exceed 20mg/L in any sample.
  - (b) The Suspended Solids shall not exceed 30mg/L in any sample.
  - (c) The E.coli requirements shall be as follows:
    - The geometric mean for a daily set of 5 separate samples taken at 30 minute intervals shall not exceed 200 E.coli per 100ml.
    - No individual count shall exceed 1000 E.coli per 100ml.
  - (d) The Free Residual Chlorine value shall be between 0.3mg/L and 0.5mg/L after 30 minutes average detention time at the peak flow of 650L per 2 hours.

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Regis  
Fair Trade* 2.

Should the plant prove to be unsatisfactory in any respect during service, and therefore require modification to achieve the prescribed standards, all installed "HUNTER" 5100L plants shall be modified accordingly. It will also be necessary to subject any modified model to full performance evaluation in compliance with the Commission's Authorisation procedures current at the time of re-testing.

3. The "HUNTER" 5100L plant shall not be installed in domestic applications where more than 8 persons are to be served.
4. Each plant shall be permanently marked with the manufacturer's name, registered trademark (if applicable), and product identification in a position readily visible after installation.
5. No modification to the specified process, equipment, materials and fittings shall be undertaken without prior authorisation from Water Resources Commission, Queensland.
6. Each unit shall be supplied with detailed operating and maintenance instructions for the information of the owner.
7. The manufacturer shall provide the Water Resources Commission, Queensland, with a current list of servicing agents who can provide regular routine service, at intervals not exceeding 90 days, to all plants installed and who can further provide a 24 hour emergency breakdown service to ensure continuous and satisfactory operation of the unit. The servicing agent shall maintain an adequate supply of spare parts for the unit at all times.
8. In the event of the owner failing to renew his/her service contract the manufacturer or his servicing agent shall advise the Local Authority.
9. A copy of the three monthly or any emergency service report shall be forwarded to the Local Authority, a further copy to the owners, and a final copy retained by the service agent.

Before installation of the authorised plant, approval shall be obtained from the relevant Local Authority and any requirements of that Local Authority in regard to the installation shall be complied with. Should any of the above conditions not be met, authorisation may be withdrawn.

Yours faithfully,

*df*  
for COMMISSIONER OF WATER RESOURCES

**Department of Natural Resources and Mines  
Queensland**

**MODEL APPROVAL (Biocycle 5100L AWTS)  
AMENDMENT No. 1  
Section 77—*Standard Sewerage Law***

1. The Biocycle 5100L Aerated Wastewater Treatment System was approved for use in Queensland by letter of authorisation dated 15 March 1990.
2. Department of Natural Resources and Mines has been advised that the approval for the Biocycle 5100L was acquired by Jowa Group Pty Ltd on 4 October 2000 and the approval should be amended.
3. Approval is granted for the modification described in clause 2 above and the conditions applying to the authorisation dated 15 March 1990, apply to the amended approval.



R Reilly  
**General Manager  
Water Industry Compliance**

Date approved: 3 July 2003



# Water Resources Commission

Your reference:  
In reply please quote  
our reference: 18690  
When enquiring  
please ask for: IK Brown  
Telephone: (07) 224 2654

Mineral House, 41 George Street, Brisbane.  
G.P.O. Box 2454, Brisbane, Q. 4001.  
Telex 41761; Facsimile (07) 221 9312

28th February, 1990

The Director  
Biocycle Queensland  
PO Box 13  
TOOWONG, QLD 4066.

*Superseded by  
authorisation dated 15/3/90*

Dear Sir,

Authorisation for Biocycle "HUNTER" 5100L capacity  
Household Sewerage Treatment Plant

The specifications for the above plant have been examined and it is advised that your application for authorisation of the plant can now be finalised.

It is accepted that this plant is a variant of the previously authorised 4700L and 6000L plants and that it is similar in design and specification to those plants. It is also acknowledged that the two latter plants have already been the subject of detailed performance evaluation as a condition of authorisation.

Approval is granted for the installation of the " HUNTER " 5100L units within the State of Queensland subject to the following conditions:

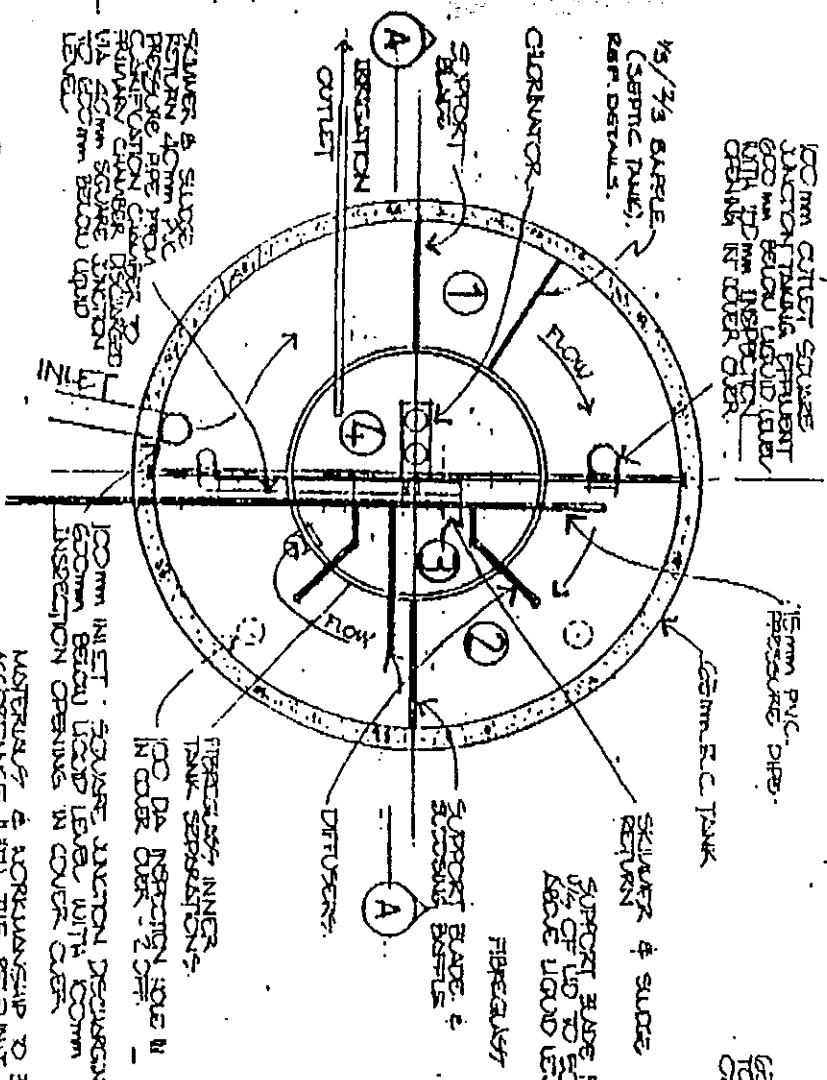
1. The plants, when installed, must continue to perform satisfactorily, producing an effluent to comply with the following standard when tested in accordance with procedures recommended by the Commission:
  - (a) The 5 day Biochemical Oxygen Demand not to exceed 20mg/L in any sample.
  - (b) The Suspended Solids not to exceed 30mg/L in any sample.
  - (c) The E.coli requirements are as follows:
    - The geometric mean for a daily set of 5 separate samples taken at 30 minute intervals is not to exceed 200 E.coli per 100ml.
    - No individual count is to exceed 1000 E.coli per 100ml.

- (d) The Free Residual Chlorine value is to be between 0.3mg/L and 0.5mg/L after 30 minutes average detention time at the peak flow of 650L per 2 hours.
2. Performance testing of the 5100L plant for authorisation purposes will not be required at this stage. But, should the plant prove to be unsatisfactory in any respect during service, and therefore require modification to achieve the prescribed standards, all installed "HUNTER" 5100L plants shall be modified accordingly. It will also be necessary to subject any modified model to full performance evaluation in compliance with the Commission's Authorisation procedures current at the time of re-testing.
  3. The "HUNTER" 5100L plant shall not be installed in domestic applications where more than 8 persons are to be served.
  4. Each plant shall be permanently marked with the manufacturer's name, registered trademark (if applicable), and product identification in a position readily visible after installation.
  5. No modification to the specified process, equipment, materials and fittings shall be undertaken without prior authorisation from Water Resources Commission, Queensland.
  6. Each unit must be supplied with detailed operating and maintenance instructions for the information of the owner.
  7. The manufacturer must provide the Water Resources Commission, Queensland, with a current list of servicing agents who can provide regular routine service, at intervals not exceeding 90 days, to all plants installed and who can further provide a 24 hour emergency breakdown service to ensure continuous and satisfactory operation of the unit. The servicing agent shall maintain an adequate supply of spare parts for the unit at all times.
  8. In the event of the owner failing to renew their service contract the manufacturer or his servicing agent shall advise the Local Authority.
  9. A copy of the three monthly or any emergency service report shall be forwarded to the Local Authority, a further copy to the owners, and a final copy retained by the service agent.

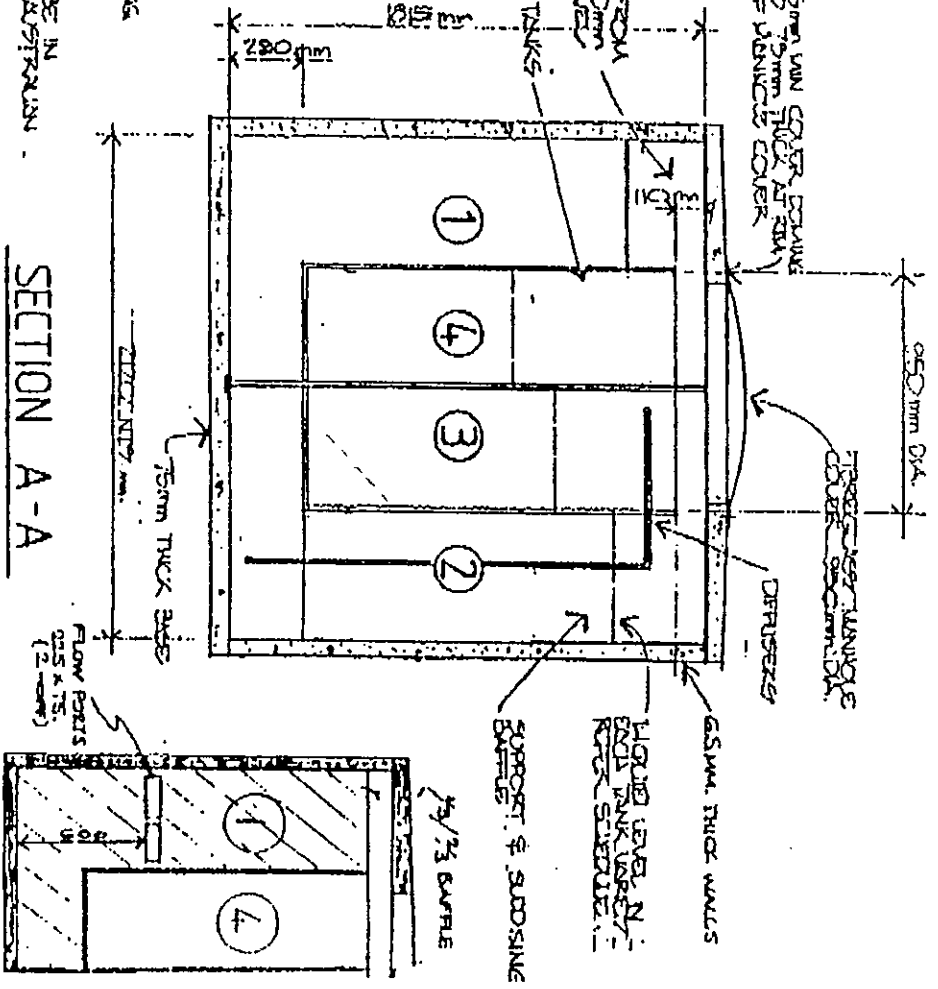
Before installation of the authorised plant, approval must be obtained from the relevant Local Authority and any requirements of that Local Authority in regard to the installation must be complied with. Should any of the above conditions not be met, authorisation may be withdrawn.

Yours faithfully,

*Kenny Brown*  
for COMMISSIONER OF WATER RESOURCES



MATERIALS & WORKMANSHIP TO BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS IN PARTICULAR AS 2039 - PRT AS 2040 - PRT AS 2041 - PRT AS 2042 - PRT AS 2043 - PRT AS 1490 - PRT



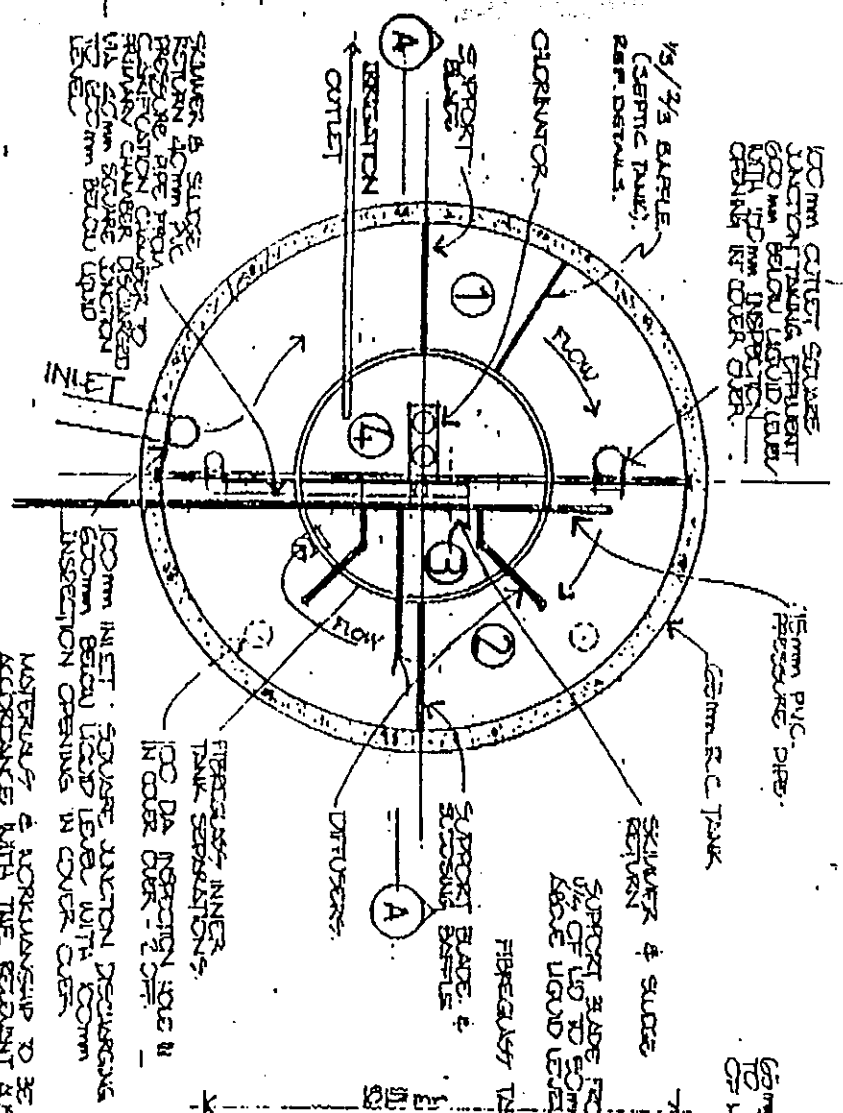
TANK SCHEDULE			
№	TYPE	LITRES	LL OF INTERCONNECTORS FROM TOP OF TANK
1	SEPTIC TANK TREATMENT	2249	235mm
2	ABRICATION TANK	217	345mm
3	CLARIFICATION TANK	350	360mm
4	CLARIFICATION & IRRIGATION TANK	300	600mm

**BICYCLE HOUSEHOLD WASTE WATER TREATMENT SYSTEM**

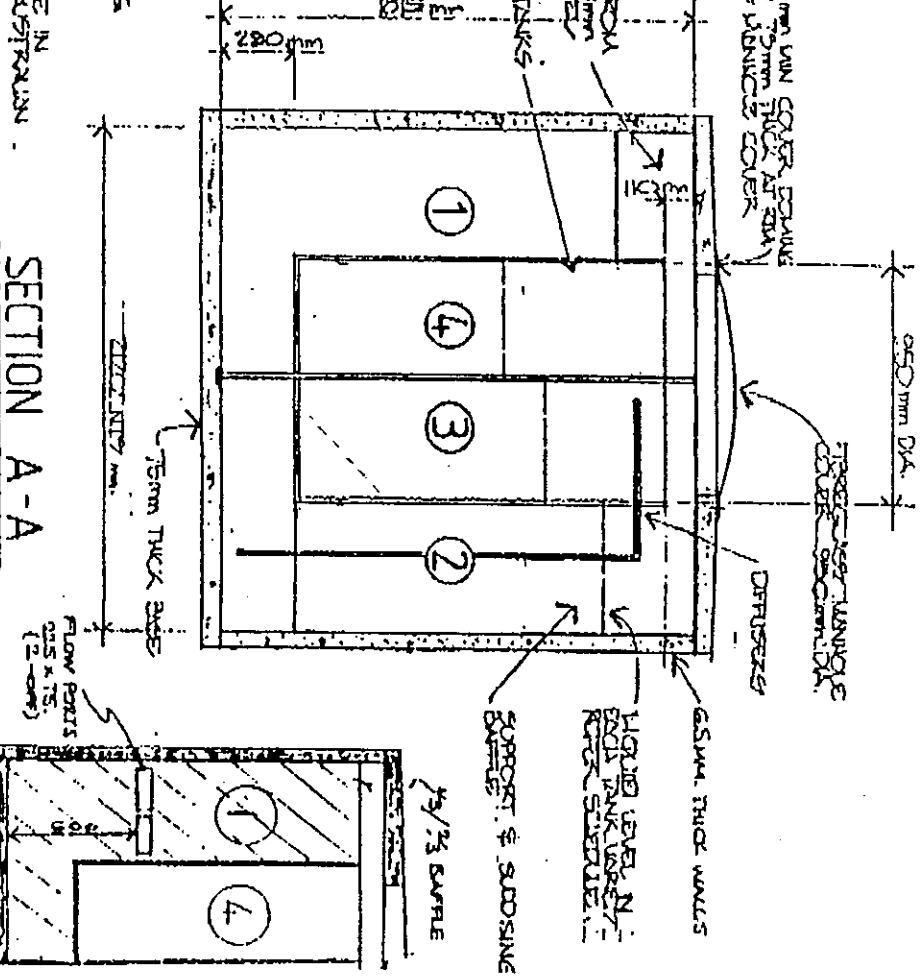
-THE HUNTER - 5100 LITRE - FOR QUEENSLAND

DAVID de KANTZOW  
CONSULTING ENGINEER  
217 WHALE BEACH RD WHALE BEACH  
PHONE 971730

SCALE 1:20  
DATE JUNE 86  
APPROVED:



PLAN



TANK SCHEDULE			
№	TYPE	LITRES	DEPTH
1	SEPTIC TANKS TREATMENT	2249	1500 mm
2	AERATION TANK	2177	1470 mm
3	CLARIFICATION TANK	350	1240 mm
4	DISINFECTION TANK	300	1000 mm

BICYCLE HOUSEHOLD WASTE WATER TREATMENT SYSTEM

THE HUNTER - 5100 LITRE - FOR QUEENSLAND

DAVID de KANTZOW  
CONSULTING ENGINEER  
277 WHALE BEACH RD WHALE BEACH  
PHONE 997720

SCALE 1:20  
DATE JUNE 86  
APPROVED: