



Tasmania

Certificate of Accreditation

On-Site Waste Water Management System

This Certificate of Accreditation is hereby issued by the Minister for Justice and Workplace Relations pursuant to Section 59(2) of the Building Act 2000 and Part G2 of the Tasmanian Plumbing Code 2006.

System: **Ozzi Kleen RP10 & RP10A AWTS**
Manufacturer: **Neatport Pty. Ltd.**
 A.C.N. 063 770 534
Trading as: **Suncoast Waste Water Management**
Of: **59 Industrial Avenue,**
 KUNDA PARK QLD 4556

This is to certify that the Ozzi Kleen RP10 and RP10A AWTS as described in Schedule 1, has been accredited as an on-site waste water management system for use in a single dwelling in Tasmania. This accreditation is subject to the conditions of accreditation and permitted uses specified in Schedule 2, and in accordance with the Tasmanian Plumbing Code 2006.

Mark Smith
Director of Building Control
delegate of the Minister for Justice and Workplace Relations

Date of Issue: 18 October 2007

Certificate No: BSR 0389/2007

This Certificate of Accreditation is in force until 18 October 2012

SCHEDULE 1: System Specification

OZZI KLEEN RP10 & RP10A AWTS

General Description

The RP10 & RP10A Aerated Waste Water Treatment Systems (AWTS) are designed to treat the waste water from a residential dwelling occupying up to 10 persons subject to the following parameters not being exceeded.

Parameter	Raw Wastewater Characteristics
Wastewater treatment capacity	10 persons EP at 200 L/person/day
Maximum hydraulic load	2,000 L/day
Biological Oxygen Demand (BOD ₅)	350 mg/L or 70 g/day/person
Total Suspended Solids (TSS)	350 mg/L or 70 g/day/person
Total grease and oils	75 mg/L
pH	6 < pH < 10
Wastewater temperature range	10°C to 38°C

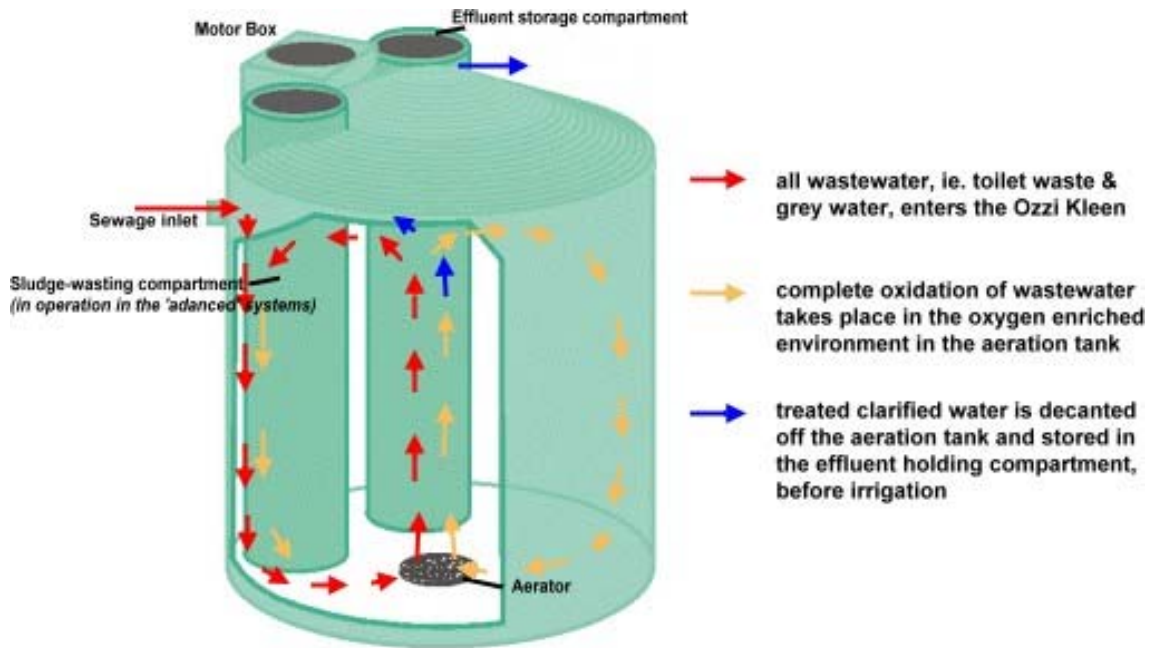
The RP10 is contained in a vertical axis cylindrical roto-moulded polyethylene collection well with a design hydraulic capacity of 4150 litres. The systems working water level is 1600 mm.

The system consists of:

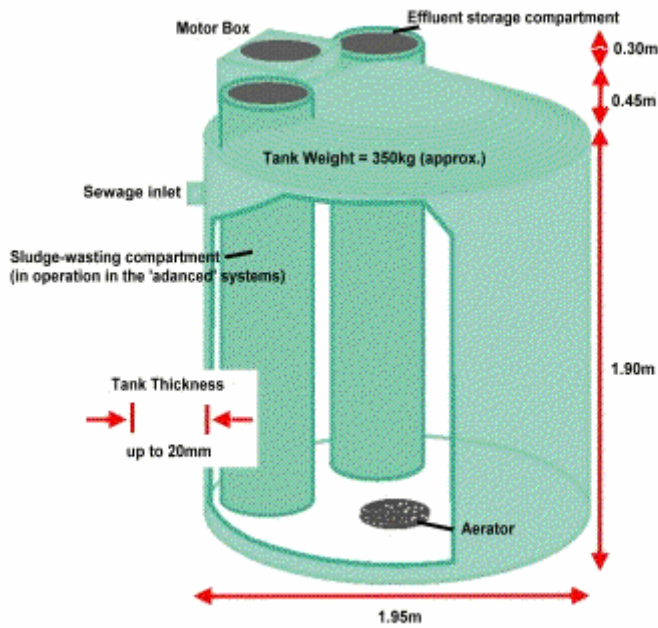
- An aeration/sedimentation chamber with a capacity of 4150 litres where the treatment of the waste water occurs through three intermittent cycles as follows-
 - Aeration
 - Settling
 - Decant
- A combined chlorine contact chamber and irrigation pump chamber with a capacity of 450 litres incorporating a capacity of 300 litres for chlorine contact of the effluent;
- A waste sludge storage chamber;
- Air is supplied by a Yasanaga Lp80 air blower with an output of 80 litres per minute;
- A submersible irrigation pump with an output of 50 litres per minute at 9 metres head.

In addition to the above the RP10A provides for Phosphate and Nitrogen reduction through Nitrification/Denitrification by the addition of flocculating chemicals (ferric chloride dosing).

<i>Date of issue: 18 October 2007</i>	<i>Director of Building Control delegate of Minister for Justice and Workplace Relations</i>
---------------------------------------	--



RP10 FLOW DIAGRAM



RP10 DIMENSIONS

Schedule 2: Conditions of Accreditation

Definitions

In this schedule:

AS/NZS 1547 means the Joint Australian/New Zealand Standard AS/NZS 1547:2000 *On-site domestic-wastewater management*;

AS/NZS 1546.1 means the Joint Australian/New Zealand Standard AS/NZS 1546.1:1998 *On-site domestic wastewater treatment units, Part 1: Septic tanks*;

AS/NZS 3000 means the Joint Australian/New Zealand Standard AS/NZS 3000:2000 *Wiring rules*;

AS/NZS 5667 means the Joint Australian/New Zealand Standard AS/NZS 5667.1:1998 *Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and preservation and handling of samples*;

BOD₅ means 5-day Biochemical Oxygen Demand;

Council means the Municipal Council having jurisdiction;

Commissioned means when the test results from a NATA Certified Laboratory show that the water quality requirements for the *system* have been met and all pre-commissioning tests have been carried out in accordance with AS/NZS 1547 on all associated equipment and the irrigation system (where installed);

Designer means a person who has a specialty in the area of designing on-site waste water management systems and may include but not be restricted to appropriately trained professional engineers, soil scientists, land surveyors and plumbers;

Director means the Director of Building Control;

FC means faecal coliforms;

Manufacturer means Suncoast Waste Water Management;

NATA means National Association of Testing Authorities;

Permit means a Permit issued by the council pursuant to section 82 of the *Building Act 2000*;

Permit authority means a person or body authorised for that purpose by the *council* of the municipal area in which the on-site waste water management system is installed;

SS means Suspended Solids;

System means OZZI KLEEN RP10 or RP10A;

N means Nitrogen;

TPC means the Tasmanian Plumbing Code 2006.

1.0 General

- 1.1 The *system* must be supplied, constructed and installed in accordance with the design submitted and accredited by the Department Of Justice.
- 1.2 The *system* must not be installed in a plumbing installation other than in accordance with the conditions of *permit* issued by the *permit authority*.
- 1.3 The *manufacturer* must supply the owner and occupier, of each installation, with a user manual setting out the following:
 - (a) the treatment process;
 - (b) procedures to be followed in the event of a system failure;
 - (c) emergency contact number;
 - (d) care, operation, monitoring and maintenance requirements; and
 - (e) inspection and sampling procedures to be followed as part of the on-going monitoring program required by the *permit authority*.
- 1.4 Any proposed modifications to the *system's* specified processes, equipment, materials, fittings or manuals must be authorised by the *Director* and may be subject to additional verification or testing.
- 1.5 The *system* is authorised for in ground installation only.
- 1.6 The *system* must not be deployed in areas where the annual climatic conditions will allow the effluent in the primary tank to fall below 10⁰ Celsius or to areas where the annual climatic conditions will negatively impact on its proper operation (refer to system specifications).
- 1.7 Each unit must be provided with a permanent, clear indelible notice in a prominent position that is readily visible after installation. The notice is to include, as a minimum, the following information:
 - (a) the *manufacturer's* name or registered mark;
 - (b) model number or designation;
 - (c) the month and year of *manufacture*;
 - (d) the capacity in litres/week;
 - (e) top load limitations; and
 - (f) weight of unit.
- 1.8 The owner of the *system* must enter into and maintain a maintenance contract with the *council*, the *manufacturer* of the *system*, or other *council* approved person.
- 1.9 The owner must enter into an agreement with the *council* to maintain the maintenance contract where that contract is with the *manufacturer* of the *system* or other *council* approved person.
- 1.10 The *manufacturer* must provide the following information to each *permit authority* where it is intended to install a *system* in their jurisdiction:
 - (a) Statement of warranty
 - (b) Statement of service life

- (c) Quality Assurance Certification
 - (d) Installation Manual
 - (e) Service Manual
 - (f) Owner's Manual
 - (g) Service Report Form
 - (h) Engineering Drawings on A3 format
 - (i) Detailed Specifications
 - (j) A4 Plans
 - (k) A copy of this Certificate Of Accreditation and associated Schedules.
- 1.11 The *manufacturer* is to keep a register of installed systems in Tasmania and be made available to the *Director* on request.
- 1.12 Copies of any report or certificate required by the conditions of accreditation are to be made available to the *Director* on request.
- 1.13 When issuing a *permit* the *permit authority* is to satisfy itself that, the *designer's* choice of the *system* configuration is optimal for the proposed site conditions. Prior to the issue of a *permit* to install a *system* the following reports must be submitted with an application to the *permit authority*:

Site-and-soil evaluation report

This report is to detail results of an assessment of the individual lot(s) for the public health, environmental, legal and economic factors which are likely to impinge on the location and design of a land-application system and an evaluation of the site and soil characteristics to determine feasible options for designing and sizing a land-application system. (Refer to AS/NZS 1547 Clause 4.1.5 and associated appendices to 4.1).

Design report

The Design Report is to include the following:

- (a) Relevant aspects of the Site-and-soil Evaluation Report.
 - (b) A report on the selection of the land-application system. (Refer to AS/NZS 1547, Clause 4.2.4 and associated appendices to Clause 4.2 for further information).
 - (c) A report on the selection of the wastewater-treatment unit. (Refer to AS/NZS 1547, Clause 4.3.6 and associated appendix to Clause 4.3 for further information).
 - (d) The Design Report is to provide sufficient information to show that the performance objectives of Part 2 of AS/NZS 1547 have been met.
- 1.14 The following reports must be submitted to the *permit authority* and made available to the *Director* upon request after the system is *commissioned*:

Installation and commissioning report

The Installation and Commissioning Report is to cover the 'as-constructed' records of the system together with the results of commissioning tests to demonstrate correct construction and installation and is to be provided to the *permit authority* on completion of the work. (Refer to and AS/NZS 1547

Clause 4.5.6.3 and associated appendices to Clause 4.5 for further information).

Inspection and Maintenance Report

Maintenance reports cover ongoing inspection and maintenance operations in order to monitor the operation of the wastewater system. (Refer to AS/NZS 1547 Clause 3.7.4 and associated Appendix 3A for further information).

- 1.15 The Certificate of Accreditation is valid for five (5) years from the date of issue or until withdrawn by the *Director*.

2.0 Waste Water Discharge

- 2.1 Land application systems used in conjunction with the system must satisfy the relevant requirements of AS/NZS 1547.
- 2.2 Effluent distribution by surface or subsurface irrigation may be permitted where the *permit authority* is satisfied that the application for a *permit* to install the *system* has demonstrated that the:
- (a) effluent can be retained within the authorised land application area;
 - (b) irrigation system has been designed and is capable of being installed and maintained in accordance with AS/NZS 1547;
 - (c) the location of the land application system satisfies the relevant requirements of the *State Policy on Water Quality Management 1997*; and
 - (d) the discharge is capable of satisfying the relevant water quality limits set out in section 5.

3.0 Installation and Commissioning

- 3.1 The installation and operation of the *system* must comply with the conditions of accreditation and the *manufacturer's* installation requirements.
- 3.2 The installation of the *system* and all plumbing work carried out in connection with the *system* must satisfy the requirements of the *Building Act 2000*, *TPC*, *Tasmanian Plumbing Regulations 2004* and be carried out by a registered plumber with appropriate competencies.
- 3.3 All installations of the system must be installed in accordance with the installation requirements set out in *Appendix A1 – On-site Waste Water Management Systems* of the *TPC*.
- 3.4 All electrical work must be carried out by a licensed electrician and in accordance with relevant provisions of AS/NZS 3000.
- 3.5 The plastic tanks are authorised for in ground installation only unless a detailed engineering design is completed to cover the tanks for above or partially above ground installation. The design must provide details for structural integrity of the tanks and details for protection from ultraviolet degradation.
- 3.6 Each installation must be inspected and checked by the *designer* or the *designer's* agent. The *designer* on completion is to certify that the installation has been constructed, installed and *commissioned* in accordance with its

design, the conditions of accreditation and any additional requirements of the *permit authority*.

- 3.7 Where discharging waste water to a land application system by shallow sub-surface or above ground irrigation a lockable sampling tap or gate valve is to be provided on the outlet (service) pipe to the irrigation system.
- 3.8 A report is to be prepared by the *council* approved maintenance contractor detailing the inspection of the installation and the results of the commissioning tests and be accompanied by a certificate certifying that the system is operating and performing adequately.

4.0 Maintenance

- 4.1 The *system* and associated land application system must be operated and maintained to ensure they perform continuously and without any intervention between inspections carried out by the *council* approved servicing (plumbing) contractor.
- 4.2 Maintenance must be carried out at least once every three months in accordance with the conditions of accreditation and the *manufacturer's* specifications.
- 4.3 Each three (3) monthly service must include a check on all mechanical, electrical and functioning components of the system including:
- (a) Reporting on weather conditions, ambient temperature, effluent temperature and odour;
 - (b) The chlorinator and replenishment of the disinfectant;
 - (c) Pumps, air blower, fan or air venturi;
 - (d) The alarm system;
 - (e) Slime growth on filter media;
 - (f) Operation of sludge return, sludge level and desludging;
 - (g) Water meter reading (where applicable);
 - (h) Trench Operation (Where applicable);
 - (i) The irrigation area, irrigation fittings and filters; and
 - (j) On-site testing for free residual chlorine, pH and dissolved oxygen.
- 4.4 Sampling must be carried out for *BOD₅*, *SS*, *FC's* and Free Residual Chlorine, by a *council* approved person, to verify that the plant is *commissioned*. The samples are to be tested and reported on by a *NATA* certified laboratory.
- 4.5 The system is to be desludged at not greater than 5 yearly intervals. Desludging is to be carried out in accordance with the *manufacturer's* recommendations.
- 4.6 The removal and disposal of sludge must satisfy the relevant requirements of the *Tasmanian Biosolids Reuse Guidelines* published by the Department of Primary Industries and Water.

5.0 Reporting and On-going Management

- 5.1 Where any systems have been found not to operate satisfactorily during their service life, and as a result require modification to achieve the required performance requirements, in particular, water quality limits, the installed systems are to be adjusted accordingly.
- 5.2 Mandatory testing for Free Residual Chlorine is to be carried out, every three months and is to commence 3 months after the plant is *commissioned*, by using a Lovibond® or equivalent quality testing kit. The testing is to coincide with the *manufacturers* required on-going routine scheduled maintenance program.
- 5.3 In the event of failure to comply with the water quality limits under Section 5.5, fortnightly sampling for *BOD₅*, *FC*'s and Free Residual Chlorine must be carried out until the plant is *recommissioned*.
- 5.4 The method of preserving and the handling of samples taken from the plant must satisfy the relevant requirements of *AS/NZS 5667*.
- 5.5 The effluent discharged from the system when tested must not exceed the following water quality limits:
- (a) For all discharges:
- 90 % of the samples shall have a *BOD₅* less than or equal to 20 g/m³ with no sample greater than 30 g/m³.
 - 90 % of the samples shall have total *SS* less than or equal to 30 g/m³ with no sample greater than 45 g/m³.
 - No samples are to have a total *N* count greater than 10 g/m³ (RP10A model only).
 - No samples are to have total *P* count greater than 5 g/m³ (RP10A model only).
- (b) For surface irrigation
- 90 % of the samples shall have a *BOD₅* less than or equal to 20 g/m³ with no sample greater than 30 g/m³.
 - 90 % of the samples shall have total *SS* less than or equal to 30 g/m³ with no sample greater than 45 g/m³.
 - The samples taken on each occasion must have a *FC* count not exceeding a median value of 10 organisms per 100 mL with 80% of the samples containing less than 20 organisms per 100 mL and no sample exceeding 100 organisms per 100 mL.
 - No samples are to have a total *N* count greater than 10 g/m³ (RP10A model only).
 - No samples are to have total *P* count greater than 5 g/m³ (RP10A model only).
- (b) For above ground irrigation or where required by the *permit authority*, Free Residual Chlorine concentrations are to be greater than or equal to 0.5 g/ m³ and less than 2.0 g/m³.
- 5.6 It is recommended that the *council* cause annual random surveillance for *FC*'s at not less than 25% of the installations at the individual owner's expense. All installations should be monitored over a four-year period.

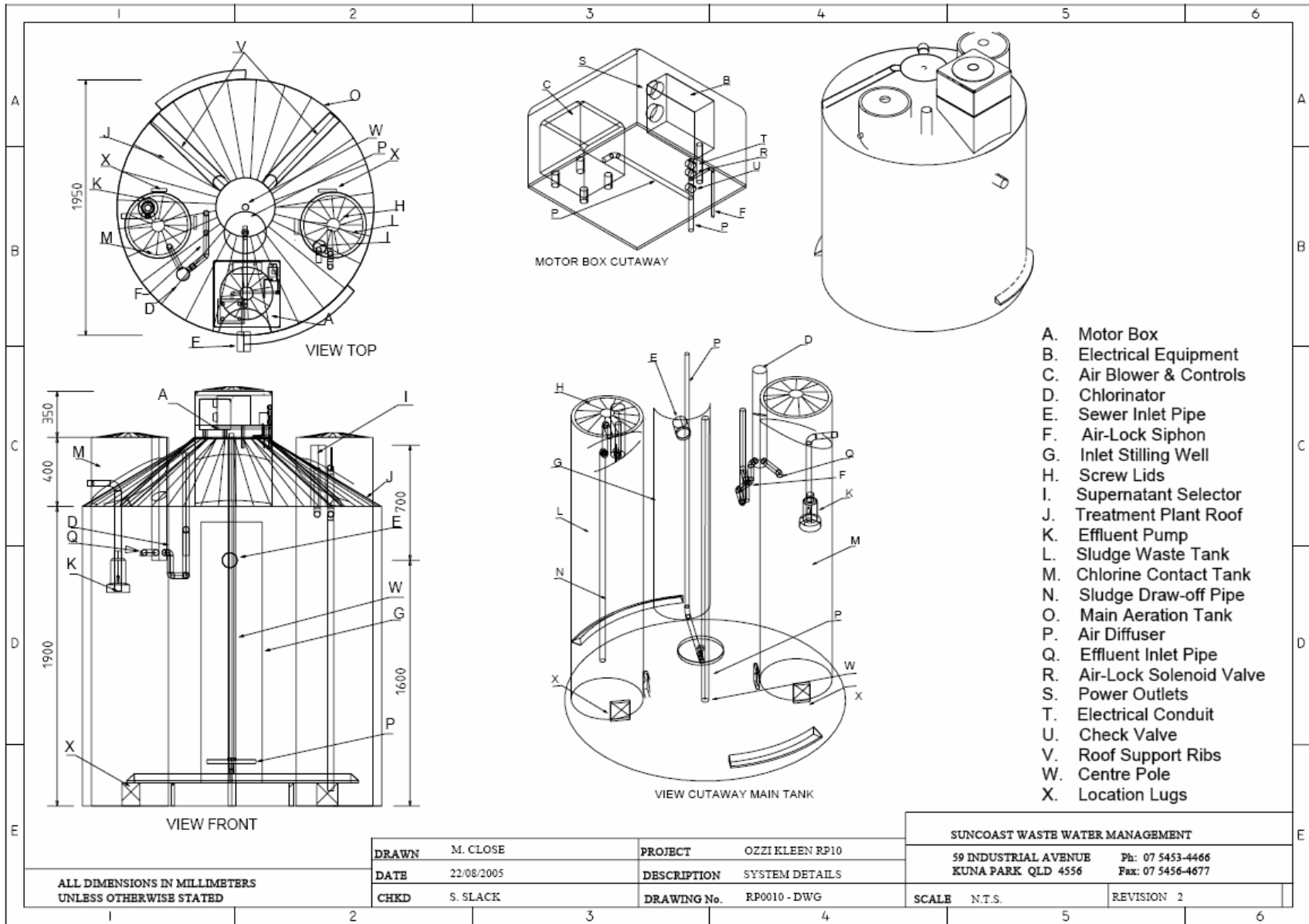
- 5.7 Copies of the following reports and certificates must be submitted to the *permit authority* and the owner as soon as practicable after the system is *commissioned* and after each scheduled or unscheduled service for the period specified in the *permit*:
- (a) the initial plant installation and commissioning report;
 - (b) all laboratory analytical test reports; and
 - (c) all inspection and maintenance reports accompanied by a certificate referred to in condition 3.8.

6.0 Permitted uses

- 6.1 The effluent is suitable for irrigating ornamental garden beds by way of any of the forms of irrigation described in *AS/NZS 1547*:
- (a) Surface spray-irrigation
 - (b) surface drip-irrigation; or
 - (c) sub-surface drip-irrigation covered by mulch which is maintained with 100 mm cover.

Each of the above forms of irrigation is subject to consent from the *permit authority*.

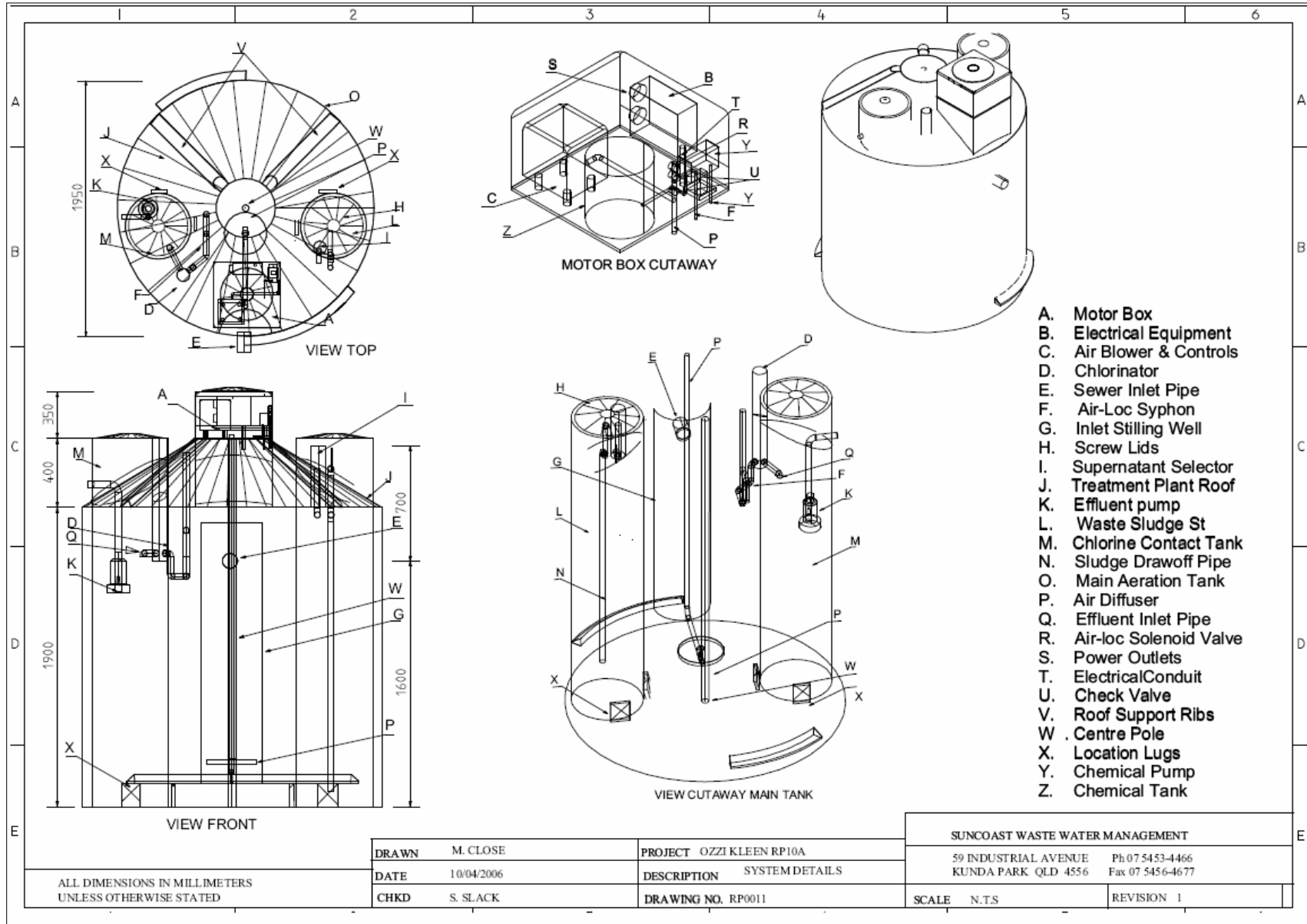
APPENDIX: 2A – RP10



Date of Issue: 18 October 2007

Director of Building Control
delegate of Minister for Justice and Workplace Relations

APPENDIX: 2B - RP10A



Date of Issue: 18 October 2007

Director of Building Control
 delegate of Minister for Justice and Workplace Relations