

TREATMENT PLANT APPROVAL 14/2023
Plumbing and Drainage Act 2018, part 4.



Approval

1. The **Global Rotomoulding – WC 1500** (“the system”) described in the Specifications and Drawings in the attached Schedule and manufactured by **Global Rotomoulding Pty Ltd** (ABN 79084711535) (“the manufacturer”) has been assessed in accordance with the Queensland Plumbing and Wastewater Code (QPW Code).
2. Approval is granted for the system as an advanced secondary quality wastewater treatment system, subject to compliance by the manufacturer with the requirements of the *Plumbing and Drainage Regulation 2019*, part 4 and the conditions of approval detailed below.
3. This approval, the conditions of approval and the Schedule comprise the entire Chief Executive Approval document.
4. Any modification by the manufacturer to the design, drawings or specifications scheduled to this approval must be approved by the Chief Executive.

Conditions of approval

5. The manufacture, installation, operation, service, and maintenance of the systems must be in conformity with the conditions of this Treatment Plant Approval.
6. The system when tested by a certification accreditation body in accordance with AS1546.3:2017 was found to comply with the advanced secondary 10 EP/1500 L level effluent criteria and must continue to meet the following requirements:

TABLE 2.1 (AS1546.3:2017)

**EFFLUENT COMPLIANCE CRITERIA FOR AN STS WITH NO NUTRIENT
REDUCTION FACILITIES**

Parameter	Secondary effluent		Advanced secondary effluent	
	90% of samples	Maximum	90% of samples	Maximum
BOD ₅	≤ 20 mg/L	30 mg/L	≤ 10 mg/L	20 mg/L
TSS	≤ 30 mg/L	45 mg/L	≤ 10 mg/L	20 mg/L
<i>E. coli</i> *	≤ 10 cfu/100 mL	30 cfu/100 mL	≤ 10 cfu/100 mL	30 cfu/100 mL
FAC †	Minimum 0.5 mg/L ‡	N/A	Minimum 0.5 mg/L ‡	N/A
Turbidity §	N/A	N/A	N/A	10 NTU

* Where disinfection is required.

† Where chlorine disinfection is used.

‡ Minimum level, not 90% of samples.

§ Where UV light is used for disinfection (see Paragraph B3.1).

7. Each system must be serviced in accordance with the accreditation certificate issued by Global Certification Pty Ltd on 28 June 2023 (certificate number SMK40298), and details supplied in the owner's operation and maintenance manual.
8. Each system must be supplied with —
 - (a) a copy of this Treatment Plant Approval document,

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- (b) details of the system,
 - (c) instructions for authorised persons for its installation,
 - (d) a copy of the owner's manual to be given to the owner at the time of installation, and
 - (e) detailed instructions for authorised service personal for its operation and maintenance.
9. At each anniversary of the Treatment Plant Approval date, the supplier must submit to the Chief Executive a list of all systems installed in Queensland during the previous 12 months. Where the Chief Executive is notified of any system failures, the Chief Executive may randomly select a number of installed systems for audit. The Chief Executive will notify the supplier's nominated NATA accredited laboratory which systems are to be audited for BOD⁵ and TSS. The sampling and testing of the selected systems, if required, is to be done at the supplier's expense. The following results must be reported to the Chief Executive,
- (a) Address of premises,
 - (b) Date inspected and sampled,
 - (c) Sample identification number,
 - (d) BOD⁵ for influent and effluent, and
 - (e) TSS for influent and effluent.
10. The Chief Executive may, by written notice, cancel this approval if the manufacturer/supplier fails —
- (a) to comply with one or more of the conditions of approval; or
 - (b) within 30 days, to remedy a breach, for which a written notice been given by the Chief Executive.
11. This approval may only be assigned with the prior written consent of the Chief Executive.
12. This approval expires on 29 September 2028 unless cancelled earlier in accordance with paragraph 10 above.

Lindsay Walker

Treatment Plant Approval

Approved by: Lindsay Walker

Delegated Authority

Department of Energy & Public Works



Level 15,
53 Albert Street Brisbane
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Director

Plumbing, Drainage and Special Projects

Date approved: 26 September 2023

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SCHEDULE

Specification & drawings for the

Global Rotomoulding – WC 1500

Attachment 1 – WC 1500 CAB Certificate SF01-AS124081 SMK40298.4

Attachment 2 – WC 1500 Operator's manual

Attachment 3 – WC 1500 Schematic diagrams

Treatment Plant Approval

Approved by: Lindsay Walker

Delegated Authority

Department of Energy & Public Works





STANDARDSMARK LICENCE

SAI Global hereby grants

Global Roto-Moulding Pty Ltd

ABN 79 084 711 535

14 Nans Road, Helidon Spa, QLD 4344, Australia

StandardsMark Licence

Manufactured to:

AS 1546.3:2017 - On-site domestic wastewater treatment units - Secondary treatment systems

"the StandardsMark Licensee" the right to use the STANDARDSMARK as shown below only in respect of the goods described and detailed in the Schedule which are produced by the Licensee or on behalf of the Licensee* and which comply with the appropriate Standard referred to above as from time to time amended. The Licence is granted subject to the rules governing the use of the STANDARDSMARK and the Terms and Conditions for certification and licence. The Licensee covenants to comply with all the Rules and Terms and Conditions.

Certificate No:SMK40298

Issued: 28 June 2023

Expires: 10 May 2027

Originally Certified: 11 May 2017

Current Certification: 27 June 2023

Calin Moldoveanu
President, Business Assurance
SAI Global Assurance



* For details of manufacture, refer to the licensee

The STANDARDSMARK is a registered certification trademark of SAI Global Pty Limited (A.C.N. 050 644 642) and is issued under licence by SAI Global Certification Services Pty Limited (ACN 108 716 669) ("SAI Global") Level 7 Suite 7.01, 45 Clarence Street, Sydney NSW 2000 Australia. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. Refer to www.saiglobal.com for the list of product models.



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Department of Energy & Public Works



SCHEDULE TO STANDARDSMARK LICENCE

SAI Global hereby grants

Global Roto-Moulding Pty Ltd

14 Nans Road, Helidon Spa, QLD 4344, Australia

StandardsMark Licence

Manufactured to:

AS 1546.3:2017 - On-site domestic wastewater treatment units - Secondary treatment systems

Model identification of the goods on which the STANDARDSMARK may be used:

Brand Name & Model ID	Treatment Capacity (Litre / Day)	Treatment Type	Compliance Type	Date Endorsed
UBI Aqua Mk.II 6000	1200 L/day	Aerated Wastewater Treatment System	Secondary	1 Aug 2022
WC1500	1500	Reed Bed Filter treatment system	Advanced Secondary	27 Jun 2023

End of Record

Certificate No: SMK40298

Issued Date: 28 June 2023

This schedule supersedes all previously issued schedules

* For details of manufacture, refer to the licensee

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WC – 1500 Operators manual

Caring for your UBI Aqua Aerated Wet Cell Advanced Secondary Water Treatment System: A Reference Guide for Homeowners

Thank you for purchasing a *UBI Aqua Aerated Wet Cell* Water Treatment System.





Please note: This system is designed to cater for up to 10 equivalent people with a maximum of 1500ltrs per day.

Table of Contents

<i>Thank you for purchasing a UBI Aqua Mark II 6000 Litre Water Treatment System.</i>	1
<i>Please note: This tank is designed to cater for up to 8 equivalent people.</i>	1
Safety Instructions	2
Owners are Responsible for:	3
Caring for You UBI Aqua Water Treatment System:	4
Council Regulations and Requirements	4
Tips to Avoid Trouble	5
Tips to Avoid Trouble (Continued)	Error! Bookmark not defined.
UBI Aqua Water Treatment System Explained	6
UBI Aqua Water Treatment System	6
Ideas For Landscaping And Irrigation	Error! Bookmark not defined.
Check List for System Health	7
Periods of Non Operation	7
Alarms and Potential Problems	8
Servicing Arrangements	8- 9
Customer Record	10
Quarterly Maintenance Record Sheet QF166	11

Safety Instructions

Please read the information provided.

	<p>PLEASE NOTE - Each State Government has regulations for Water Treatment System and they are required to be registered with your local council and comply with their required standards. The requirements may vary depending on your location, soil type and proximity to water ways.</p> <p>A Quarterly Maintenance report is required to be sent to council</p> <p>As a Water Treatment System owner you are responsible for ensuring your system is working properly and not posing a health risk to your family and the wider community.</p> <p>DO NOT Enter the SEWAGE TREATMENT PLANT. Risk of drowning or asphyxiation due to low oxygen environment is present. Ensure all access lids are closed securely after servicing and accessing the treatment plant to prevent unauthorized or accidental access</p>
	<p>PLEASE NOTE – Follow all safety precautions and accident prevention guidelines during installation, use, maintenance and repair of the UBI Aqua Wet Cell System. All local safety precautions and accident prevention guidelines established in the area should also be followed.</p>
 Warning Biohazard	<p>The waste water contained in the UBI Aqua Wet Cell Water Treatment Plant may contain harmful bacteria. Persons coming in contact with waste water must immediately wash and disinfect all exposed areas. Contact your personal physician for all health concerns</p>
	<p>WARNING! All electrical work required must be carried out by a licensed electrical contractor or authorised service professional.</p>

**SLIPPERY WHEN WET!**

When Maintenance is being undertaken by your certified contractor ensure children and animal are keep away from site. During cleaning, maintenance and repair work the surrounding area may become extremely slippery in some circumstances due to spilled water. Caution is to be taken when walking / standing near the UBI Aqua Water Wet Cell Treatment System when these activities are being conducted

Owners are Responsible for:

1. Obtaining council approval for onsite sewage management system installation and operation.
2. Lodging an application for an Approval to Operate every three years and carrying out request by Council for inspections or maintenance if required by local council
3. Responding to Alarms by informing your service agent.
4. Ensure there is a maintenance contract is in place.
5. Ensuring the system is fully maintained.
6. Ensuring it is inspected regularly.
7. Respond to alarms and inform service agent.
8. Getting the system fixed promptly if it is not functioning efficiently.
9. Ensure the tank does not overflow.
10. Getting the tank de-sludged at regular intervals to ensure it does not become too full to process the flow going into it. (See F301 UBI Aqua MK11 Service Manual)
11. Ensure no chemicals or fuels enter the unit.

Caring for Your UBI Aqua Wet Cell Advanced Water Treatment System:

The accumulated solids in the bottom of the Water Treatment System should be pumped out every three to five years to prolong the life of your system. (See F301 Service Manual)

Water Treatment Systems must be maintained regularly to stay working.

Neglect or abuse of your system can cause it to fail. Failing systems can

- cause a serious health threat to your family and neighbours,
- degrade the environment, especially lakes, streams and groundwater,
- reduce the value of your property,

- be very expensive to repair,
- put thousands of water supply users at risk if you live in a public water supply watershed and fail to maintain your system.

Be alert to these warning signs of a failing system:

- sewage surfacing over the disposal area (especially after storms),
- sewage back-ups in the house,
- lush, green growth over the drain field,
- slow draining toilets or drains,
- sewage odours

Council Regulations and Requirements

1. Irrigation water must not be allowed to run off onto other properties.
2. All storm water and seepage from higher levels needs to be diverted around the disposal area.
3. The council must approve that the area is turfed and landscape to their standard.
4. In States where irrigation is permitted with a waste water system - Watering of fruit trees or vegetables grown on your property is prohibited using waste water. This water is not suitable for human nor animal consumption.
5. It is recommended that you only use the sprinklers provided with the system for your waste water irrigation, this is simply to prevent confusion as to which is waste water and which is rainwater or town water.
6. As the owner of the system you are responsible for the correct operation and maintenance and to conform to council requirements.
7. Quarterly reports is to be sent to council

Tips to Avoid Trouble

DO have your tank pumped out and system inspected every 3 to 5 years by a licensed water treatment contractor (listed in the yellow pages).

DO keep a record of pumping, inspections, and other maintenance. Use the back page of this brochure to record maintenance dates.

DO practice water conservation. Repair dripping taps and leaking toilets, run washing machines and dishwashers only when full, avoid long showers, and use water-saving features in taps, shower heads and toilets.

DO have a sink strainer to prevent food particles moving into the system and slowing down the process.

DO learn the location of your *UBI Aqua Wet Cell* Water Treatment System. Keep a sketch of it handy for service visits. If your system has a flow diversion valve, learn its location, and turn it once a year. Flow diverters can add many years to the life of your system.

DO divert roof water and surface water from driveways and hillsides away from your *UBI Aqua Wet Cell Water Treatment System*. Keep sump pumps and house footing drains away from your *UBI Aqua Wet Cell Water Treatment System* as well.

DO use 'Septic Safe' cleaning aids.

DO take leftover hazardous household chemicals to your approved hazardous waste collection centre for disposal. Use bleach, disinfectants, and drain and toilet bowl cleaners sparingly and in accordance with product labels.

DON'T Turn your system off.

DON'T make or allow repairs to your *UBI Aqua Wet Cell Water Treatment System* without obtaining the required health department permit. Use professional licensed contractors when needed.

DON'T use commercial Water Treatment System Additives. These products usually do not help and some may hurt your system in the long run. The only exception is quality enzyme based cleaning products. These can improve the soil condition particularly in a clay base soil and may break down some fats. **However** it will NOT improve the function of the Water Treatment System itself.

DON'T allow anyone to drive, park or play over any part of the system. The area over the drain field should be left undisturbed with only a mowed grass cover. Roots from nearby trees or shrubs may clog and damage your drain lines.

DON'T store or stack anything on tank or drain field and reed beds.

DON'T pour oils and fats down the sink they can solidify and may block the system. Instead, put them into a container such as a milk carton and throw out with the rubbish.

DON'T use a garbage disposal unit – no food products should be disposed of in the *UBI Aqua Wet Cell Water Treatment System*.

DON'T use your toilet as a trash can by dumping non degradable products down your toilet or drains. Also, don't poison your *UBI Aqua Wet Cell* water treatment system and the groundwater by pouring harmful chemicals down the drain. They can kill the beneficial bacteria that treat your wastewater. Keep the following materials out of your system:

NON DE-GRADABLES:

Grease, disposable diapers, plastics, cat litter, cloth wipes, cotton buds, etc.

POISONS:

Grease, gasoline, oil, paint, paint thinner, pesticides, antifreeze, etc.

UBI Aqua Wet Cell Water Treatment System Explained

Water Treatment systems are individual wastewater treatment systems that use the soil to treat small wastewater flows, usually from individual homes. They are typically used in rural or large lot settings where centralized sewage treatment is impractical.

Please be aware that when you contract a contractor to de-sludge your tank, a volume of water must be in the tank to ensure the tank "does not float". Bacteria levels in the tank will be restored as soon as wastewater enters the system again.

UBI Aqua Wet Cell Water Treatment System

The Aerated Wet Cell 1500 (AWC1500) is a system which has enhanced capacity to treat waste water by means of an increased dissolved oxygen level in the waste water, this is achieved by way of the use a UBI Aqua Annular Venturi and associated Speece Cone which increase the dissolved oxygen level in water that is being recycled back through bed A or transferred from bed A to bed B as it moves through the system.

The systems components include:

- A 6000 litre septic tank,



- 2 X 7200 litre Ubi Aqua reed beds,
- 2 X Ubi Aqua 1000 litre pump wells.
- 1 X Ubi Aqua Annular Venturi.
- 1 X 900 mm Ubi Aqua Speece cone.
- 1 X NRG Wet Cell Controller and High water alarm.
- 1 X Pentair PrioX 50-500/11 M submersible pump or
Pedrollo BCM 15/50 MF submersible Pump. (Equivalent specs).
- 1 X Submersible pump to suit the disposal method for each individual job.
(i.e. either a Davey D25 VA for low pressure delivery or a Davey D42 for high pressure delivery.)

Pump well - One is positioned at the outlet end of Wet Cell one and by way of a Pentair PrioX / Pedrollo sump pump, recycles water back through bed one at 5 times per hour, cycle length pump on for 2 minutes off for 10 minutes. Each time the pump returns water through the system it passes through the venturi/cone components reintroducing more dissolved oxygen to the wastewater.

Pump well - TWO is positioned at the outlet of Wet Cell two which will receives wastewater from bed one via a manual overflow which allows for water to bypass pump one. Pump two discharges to the disposal field by way of either a Davey DV15A or for pressure pump Davey D42A pump.

Check List for System Health

Is Your System Healthy?

CLUES

- ☐ No odours outside the house.
- ☐ Toilet flushes easily and quickly.
- ☐ Water goes quickly down drains.
- ☐ Tank has been pumped out in the past five years.
- ☐ Tank has been checked in the past three months.
- ☐ Tank is regularly serviced.
- ☐ No rampant weed growth downhill of the irrigation area.

Is Your System Unhealthy?

CLUES

- ☐ The air around it smells – usually like rotten egg gas
- ☐ The ground is damp or soggy downhill of the irrigation field
- ☐ There is lots of dark green grass growing around the irrigation area
- ☐ The toilets are slow to clear, or keep backing up and overflowing
- ☐ There are lots of weeds growing down slope of the irrigation area.

Periods of Non Operation

In the event that you are away and your home is not occupied during this period there are no precaution required and your UBI Aqua system will continue to function for up to three months. However if you are likely to be away and your home un occupied for longer please contact your service provider or installer so a service of your UBI Aqua water treatment system can be undertaken to ensure the system continues to function correctly..

For More Information

For more information about maintenance or inspection of your *UBI Aqua Wet Cell* water treatment system, contact [your local Council](#) or [UBI Aqua Wet Cell](#) service agent in your area.

Alarms and Potential Problems

Possible Cause	Remedy
Low Air Pressure	
New System Low water level	Turn on tap until system fills to normal working level
High Water Level	
New System Fill Up before switched on	Level will drop over time as the power is switched on
Blocked irrigation hose	Investigate and clear blockage – check for blocked sprays.
Kinked irrigation hose	Unkink hose
If turf vales are used	Check that the key is locked in position
Pump not working	Check that the pump is plugged in and that there is power to the system.
Excessive Foaming	
Use of excess of non recommended detergents	Use recommended detergents

Servicing Arrangements

Your *UBI Aqua Wet Cell* Water Treatment System required regular service and maintenance inspections. This will be carried out by your certified technician who has undertaken the installation for the first 12 months at your costs.

A record sheet will be completed by the technician at the time of service and a copy provided to you for your record. A copy will be sent to your local council and a copy kept by the technician.

These inspections will include the following

1. General inspection of tank area, Reed bed irrigation and drainage area's.
2. Inspection of electrical equipment including, pumps, warning lights and connections.
3. Inspection of the Air system including venturi / sludge return.
4. Inspection of holding well and water treatment tank including testing water samples.
Operating desludging unit, resetting air control and operating submersible switch.
Checking bio mass growth, checking sludge levels.
5. Inspection of irrigation lines and reed beds
6. Chlorine Supply replenished.

Between 3-9 years the water treatment system will need to be pumped out this needs to be organised by the owners and a registered company of your choice. This is at cost to the owner of the water treatment system. (See F299 Service Manual for Details)

When your service providers pumps you tank out they **MUST** firstly pump the main chamber out and then the remaining chamber.

When filling the tank all chambers **MUST** be filled evenly.

Customer Maintenance Record

CONTACT	SYSTEM	COMMENTS
INSPECTION		
Date:		
TANK DESLUDGE		
DATE :		
REPAIRS		
DATE:		
APPROVAL TO OPERATE		
DATE:		

Quarterly Maintenance Record

Date		Servicing Company	
Address of property		Licence Number	
Owners Name		Service's Name	
Occupants Name		Service Qrt	1 2 3 4
Postal address		Inspection Number	

Check List	Results	Check List	Yes/NO
Air temp		Check pump float is operating correctly	
Water temp		Check alarm for high water level is operating correctly	
Water Ph Level		Check low air pressure Alarm	
Check Chlorine pellets and record the number of replacement pellets installed		Check and clean air filter, replace if needed	
Water clarity reading pump out water		Remove and clean junction filters, replace if damaged	
Dissolved Oxygen		Check and clean outlet filter if installed (subsurface irrigation should have one)	
		Check the root inhibitor filter pack and run when required for subsurface irrigation	
		Flush the Drip Line	

Observations Internal of system	Yes/NO	Option	Option	Option
Water level in all chambers correct		CIRCLE 1		
Quality of septic scum		Black Watery Patch scum	Well covered moist to Dry	No Scum
Odour of tank		Putrefying Smell	Gone off tainted Smell	Sweet earthy humus Smells
Check Bio Mass Growth				
Check Air Pipes for Leaks				
Sludge Build up		Low	Moderate	Excessive

Observations external of system	Yes/NO	Results / Comments
Check the waste water disposal area for Excessive Soakage		
Damage from vehicular traffic		
Damage from livestock		
Excessive shading or foliar growth of shrubs.		
Excessive grass on site		
Make sure all lids are in place and are done up tightly		
Flush irrigation lines if possible		

Any other recommendations.....
.....

Treatment Plant Approval

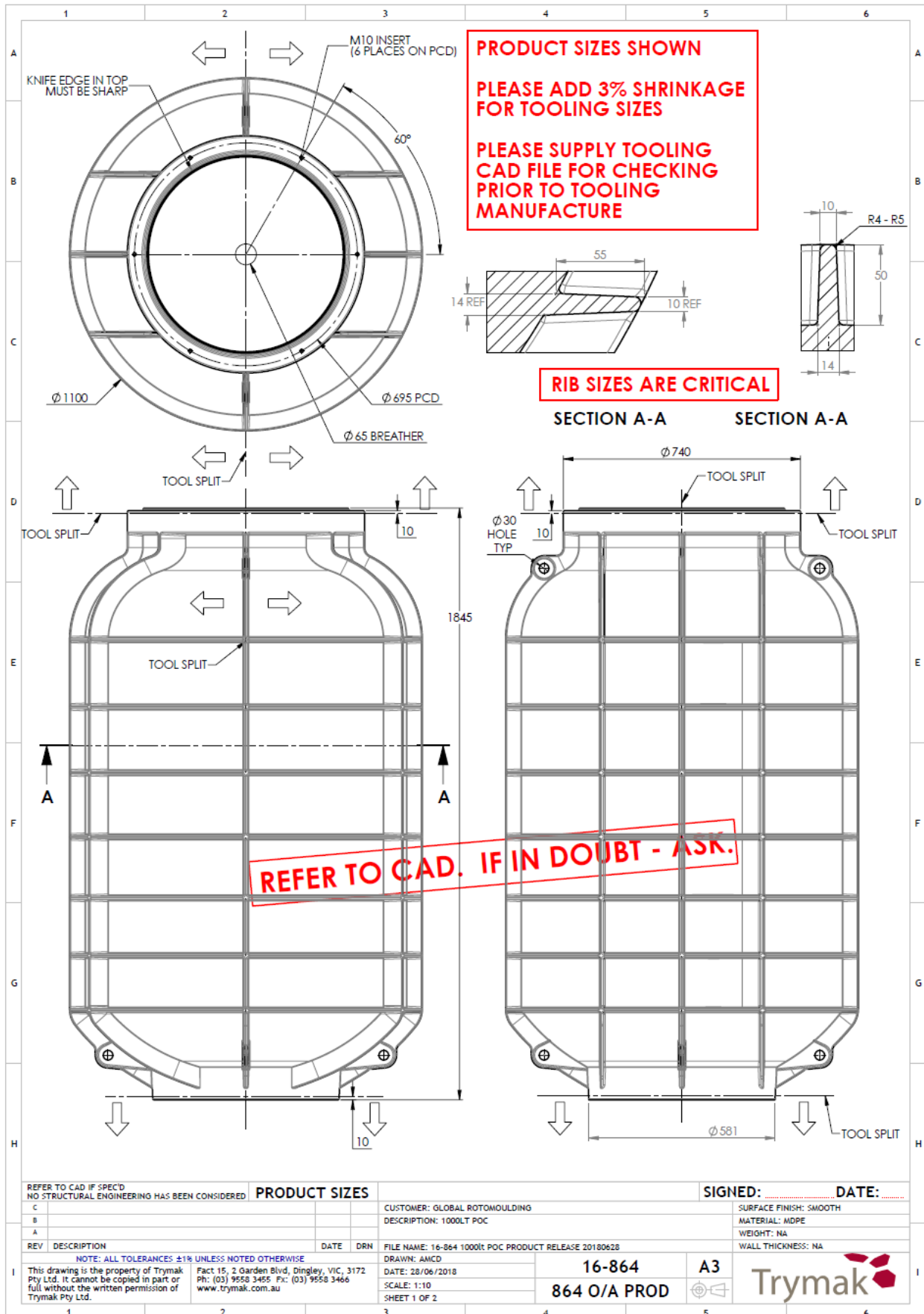
Approved by: Lindsay Walker

Delegated Authority

Department of Energy & Public Works



WC – 1500 Schematics



Treatment Plant Approval

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