

To: The Relevant Building Surveyor

This Certificate is issued in relation to the Proposed Building Works at:

Site Address 20 Lower View Road Montrose Vic 3765

Municipality Yarra Ranges Lot A

Nature of Proposed Building Work: Swimming Pools Safety: Water Recirculation Systems

Design or Part of Design of Building Work relating to:

Pool Shape	FreeForm	Length (m)	9	Max Depth (mm)	1900
		Width (m)	5.5	Beam Width (mm)	

Pool Hydraulics

Filter Loop

Solar Loop

BCA Applicable: NCC 2019 Vol.2 Part of Building: All Building Classification: Class 10b

Prescribed Classes of Building Work for which this Certificate is Issued:

Domestic Building Work relating to Structural Matter as above

Documents setting out the Design that is Certified by this Certificate:

Number	Date	Type	Pages	Prepared By
2007H39	20/08/2020	Drawings	1	Wirrawonga Consulting Pty Ltd
2007H39	20/08/2020	Specifications	Generic	Wirrawonga Consulting Pty Ltd
2007H39	20/08/2020	Computations	1	Wirrawonga Consulting Pty Ltd

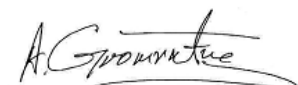
Other Referenced Documents:

Report Note

Complies with the following Provisions of the Regulations:

AS 1926.3-2010, NCC 2019 Vol.2 Part 3.10.1.0 (b)

I prepared the design, or part of the design, set out in the documents listed above. I certify that the design set out in the documents listed above complies with the provisions set out above. I believe that I hold the required skills, experience and knowledge to issue this certificate and can demonstrate this if requested to do so.



20/08/2020

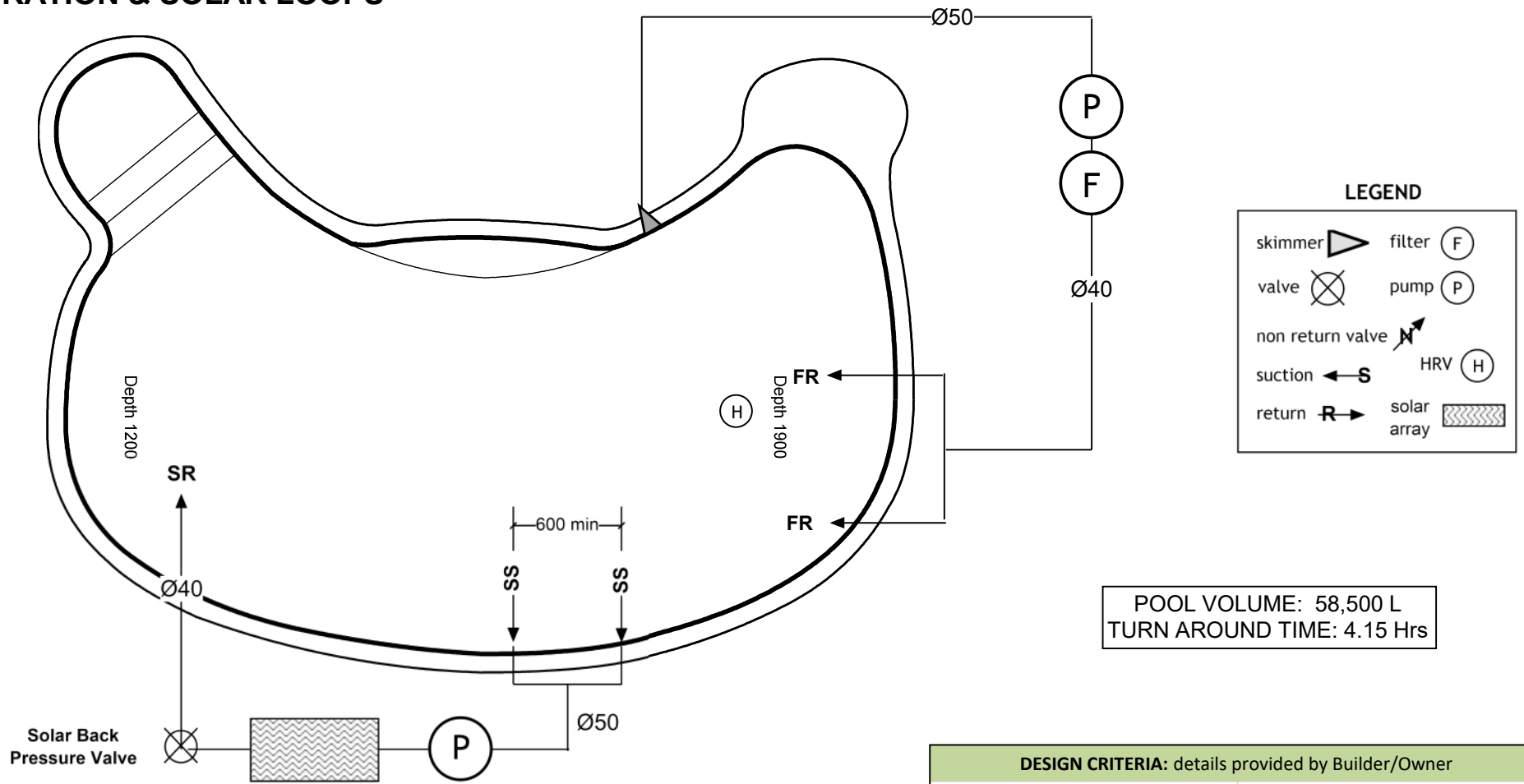
Arosha Gooneratne B.Eng, EC 41354

Category/Class Civil Engineer

Engineer Contact 03 9878 6666

Engineer Address 51 Chapman Street Blackburn North VIC 3130

POOL FILTRATION & SOLAR LOOPS



POOL VOLUME: 58,500 L
TURN AROUND TIME: 4.15 Hrs

All HRV, skimmer and other outlet covers to be compliant with AS1926.3

DESIGN CRITERIA: details provided by Builder/Owner	
Pool Length	9 m
Pool Width (excl beach)	5.5 m
Dist. Skimmer to Pump	5 m (approx)
Dist. Solar Suction to Pump	5 m (approx)

DESIGN RESULTS: refer to computations for details	
Filter Pump	Astral P320xt @ in overdrive- OK
Max. Filter Flow Rate	320 LPM Astral CA340 Cantabric Sand - OK
Solar Pump	Astral CTX280 1.0HP - OK
Suction Lines DIA.	50 mm
Delivery/Return Lines DIA.	40 mm

Revision Details:			© WirraWonga Consulting P/L 2019
A	17/08/2020	Initial Release	

WirraWonga Consulting Pty Ltd
 51 Chapman Street, Blackburn North VIC 3130
 Ph: 03 9878 6666 Email: info@wirrawonga.com.au

HYDRAULICS SCHEMATIC	
Builder or Building Contractor 20 Lower View Road Montrose VIC 3765 Kris van Gaalen	
Number: 2007H39	Sheet: 1

This drawing and any information set out hereon is the copyright property of WirraWonga Consulting Pty Ltd, and must not be loaned, modified, copied or used for any purpose other than that relating to the project for which it was prepared.

Issue: Permit	Scale: See Dwg	
Drawn: KV	Engineer: AIG	Checked:

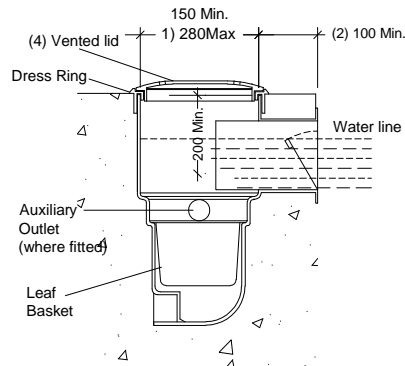
***Builder to ultimately determine final location of suction points and outlets.

In accordance with AS1926.3-2010 Clause 6.2

All wall and floor covers must be:

1. Installed in such a way that prevents their removal without the use of tools.
- AND
2. Shall be permanently marked with:
 - a) the maximum nominal pipe diameter (mm) to which it can be fitted;
 - b) the maximum allowable flow rate (L/min);
 - c) the testing authority test number and date of test

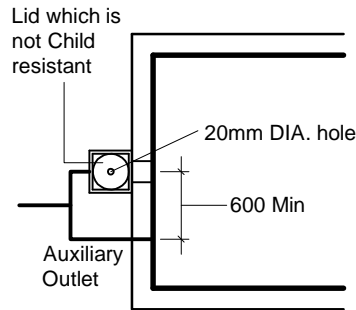
SKIMMER BOXES



SKIMMER BOX DIMENSIONS

Skimmer Box: NO AUXILLIARY OUTLET

1. The basket access hole is required to be 150mm (Min), 280mm (Max) at its widest point.
AS 1926.3-2011 Clause 5.2 (a)
- AND
2. The basket access hole shall be separated from the edge of the pool by a solid, permanent member that is not less than 100mm wide at any point.
AS 1926.3-2010 Clause 5.2 (b)
- AND
3. Must have a child resistant lid
AS 1926.3-2010 Clause 5.2 (c)(ii)
- AND
4. The lid of the skimmer box shall be vented to atmosphere with vents having a clear opening area of not less than 315mm².
AS 1926.3-2010 Clause 5.5 (d)



SKIMMER BOX LAYOUT WITH NO PROPRIETARY LID

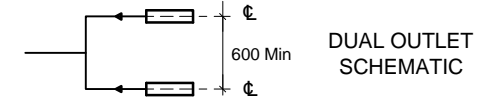
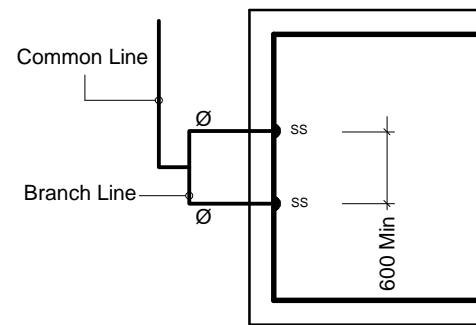
Skimmer Box: IF NOT USING A CHILD RESISTANT LID

1. The basket access hole is required to be 150mm (Min), 280mm (Max) at its widest point.
AS 1926.3-2011 Clause 5.2 (a)
- AND
2. The basket access hole shall be separated from the edge of the pool by a solid, permanent member that is not less than 100mm wide at any point.
AS 1926.3-2010 Clause 5.2 (b)
- AND
3. Skimmer box must be connected with an auxiliary outlet
AS 1926.3-2010 Clause 5.2 (c)(iii)
- AND
4. The lid of the skimmer box shall be vented to atmosphere with vents having a clear opening of not less than 315mm².
AS 1926.3-2010 Clause 5.5 (d)

POOL PLUMBING INSTALLATION NOTES:

1. Ensure all bends are adequately braced / supported to prevent deflection or vibration under pressure flow conditions.
2. Ensure all PVC pipes exposed to sunlight are adequately protected from UV degradation by covering, painting or other approved method.
3. Maintain specified cover to reinforcement at all pipe penetration points through pool shell. (50 to water, 65 to earth). Run pipes outside shell wall where possible.
4. Pressure test all lines for leakage (100 kPa min for 24 hrs) prior to backfill of trenches or covering of pipes.
5. Connection to sewer / SWD as required by Municipality or Sewerage Authority to be by licensed plumber.

WALL OUTLETS



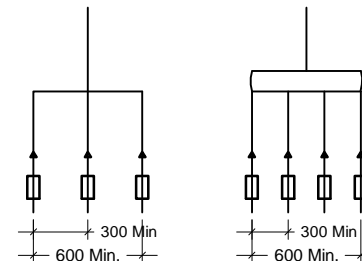
WALL OUTLETS WALL & FLOOR OUTLETS

SINGLE OUTLET REQUIREMENTS

1. All single outlets shall have a cover that has no surface dimension less than 75mm & at least one surface dimension not less than 800mm.
AS 1926.3-2010 Clause 6.1.2 (a)

THE FOLLOWING APPLIES TO ALL DUAL & MULTIPLE OUTLETS:

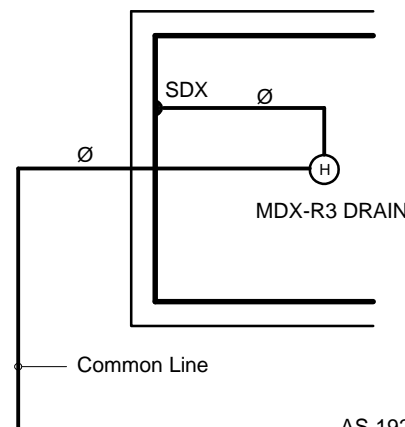
1. Diameter of branch lines shall be equal and not less than the pipe diameter marked on the outlet covers used.
AS 1926.3-2010 Clause 6.1.3 (b)
2. Branch lines shall not incorporate any devices that may restrict their diameter
AS 1926.3-2010 Clause 6.1.3 (c)
3. Connected outlets shall not be less than 600mm apart where possible, centre to centre, and where not possible a minimum of 3 outlets is required
AS 1926.3-2010 Clause 6.1.3 (d)
4. The system flow rate shall not exceed the outlet cover flow rate of a single outlet cover.
AS 1926.3-2010 Clause 6.1.3 (e)



TRIPLE OUTLET SCHEMATIC

MULTIPLE OUTLET SCHEMATIC

WALL & FLOOR OUTLETS



IN ADDITION THE FOLLOWING APPLIES TO ALL MULTIPLE OUTLET SYSTEMS:

1. Widest spaced cover shall not be less than 600mm apart and no cover shall be installed less than 300mm from adjoining cover.
AS 1926.3-2010 Clause 6.1.4 (c)
2. There should be at least one addition outlet than the number of outlets required for the total system flow.
AS 1926.3-2010 Clause 6.1.4 (a)

Contract

2007H39

Pool Hydraulics Summary Computations

FILTER LOOP		Pass
Design Duty Point	259 LPM @ 11.9 m	OK
Estimated Pool Turn Around Time	4.15 hours	OK
Computed Suction Flow Rate (Max)	N/A m/s	n/a
Number of Safety Suctions to Loop	n/a required	n/a
Suction Cover Type	Skimmer Box Only	OK
Suction Cover Flow Rating	N/A LPM	n/a
No of 40 mm return lines required	1 required	OK

SOLAR LOOP		Pass
Design Duty Point	245 LPM @ 10.7 m	OK
Estimated Turn Around Time	4.39 hours	OK
Computed Suction Flow Rate (Max)	1.80 m/s	OK
Number of Safety Suctions to Loop	1 required	OK
Suction Cover Type	Paramount SDX (x2) or similar	OK
Suction Cover Flow Rating	290 LPM*	OK
No of return lines required	1 required	OK

INFLOOR CLEANING LOOP		Pass
Design Duty Point	n/a	n/a
Estimated Turn Around Time	n/a hours	n/a
Computed Suction Flow Rate (Max)	n/a m/s	n/a
Number of Safety Suctions to Loop	n/a required	n/a
In Floor Nozzle Flow Requirement	n/a	n/a
Suction Cover Type	n/a	n/a
Suction Cover Flow Rating	n/a 400 LPM*	n/a
	n/a 290 LPM*	n/a
No of return lines required	n/a required	n/a

SPA FILTER LOOP		Pass
Design Duty Point	n/a	n/a
Estimated Turn Around Time	n/a hours	n/a
Computed Suction Flow Rate (Max)	n/a m/s	n/a
Number of Safety Suctions to Loop	n/a required	n/a
Suction Cover Type	n/a	n/a
Suction Cover Flow Rating	n/a LPM*	n/a
No of return lines required	n/a required	n/a

*80% de-rated cover flow from listed flow rate