Aquagym Max™

Technical Information Pack

Vortex™ Spas

Available exclusively at Spa WORLD

VXSSTP030424

Aquagym Max™

JETS	Up to 81
WATER CAPACITY	Up to 7,750 litres
SEATING	Up to 6 seats
DIMENSIONS	4.46 x 2.30 x 1.3/1.5m

The image shows Vortex Aquagym Max™ Avante swim spa on Gypsum colour shell and Coastal Grey cabinet.

FEATURES

Build

- Step down access
- Superior USA made Aristech™ acrylic
- Thermobond™ 4-layer shell construction
- 9 shell/cabinet colour combinations
- Galvanised steel frame construction
- Duraflex™ 'no kink' PVC plumbing
- Aromatherapy system
- Thermoclad™ maintenance-free cabinet

Water care

- Purezone™ micro filtration
- Purezone™ Ozone water clarifier

Lighting

- Hydroglow™ underwater LED floodlight

Control

- SpaNet™ premium control systems
- Spa health indicator

Hydrotherapy

- Individual seat pressure controls
- Neck therapy collar
- Hydrotherapy lounger

Optional Upgrades Included in Avanté

- Purezone AOS™ Automatic Water Sterilizer
- ThermoLock™ Dual layer insulation
- Hydroglow™ programmable lighting
- Hydroflow™ stainless steel bearing-less jets
- Hydroglow™ LED backlit water cascade
- Hydroglow™ jet & topside control lighting
- Hydroglow™ perimeter & cabinet lighting
- Hydroglow™ backlit drink holders
- Hydroglow™ backlit laminar jets

Optional Extras

- SmartLINK™ Wifi connectivity
- Vortex™ Audio WiFi Kit
- SpaNet™ Hybrid heat pump

WARRANTIES

Frame	Lifetime
Shell structure	10 yrs
Acrylic surface	5 yrs
Jets, plumbing & heater	5 yrs
Pumps & equipment	2 yrs

* Conditions apply. Specifications may change without notice. Pictures may show options not available on all models.

Vortex™ Spas

Aquagym Max™

Height comparison

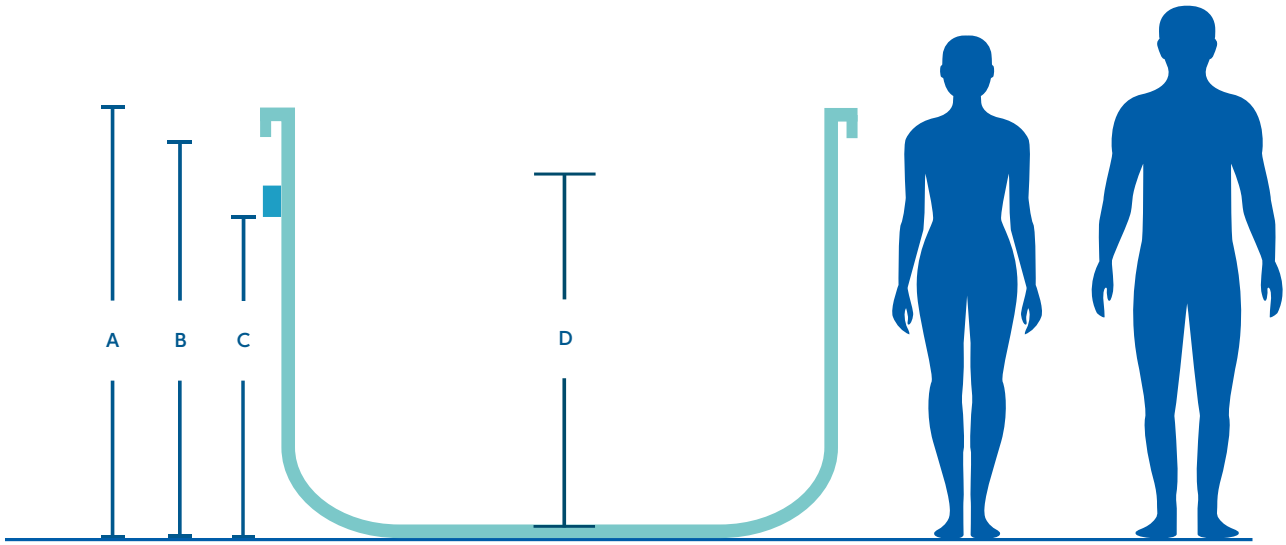


Illustration shows Aquagym Max XD™ 1.5m swim spa model

		Aquagym Max™	Aquagym Max XD™
	Model dimensions	4.46(L) x 2.30(W)m	4.46(L) x 2.30(W)m
A	Total height +-20mm	1.3m	1.5m
B	Product height under lip +-20mm	1,200mm	1,398mm
C	Height to bottom of health light +-25mm	995mm	1,192mm
D	Water depth from floor to recommended fill level	1,095mm	1,280mm

Vortex Spas

Aquagym Max™

Jet specifications

Dimensions: 4.46 x 2.30 x 1.3m

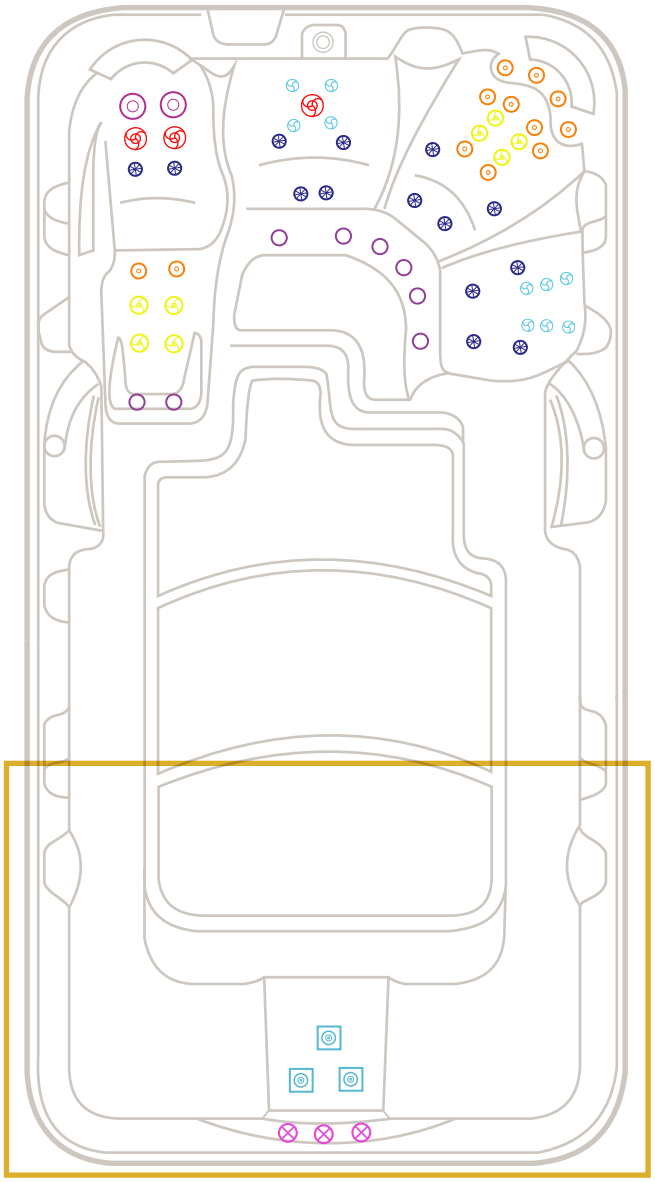
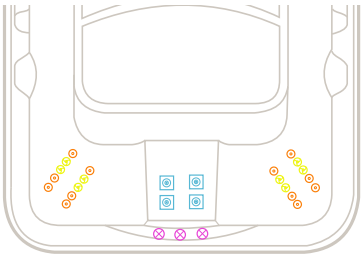
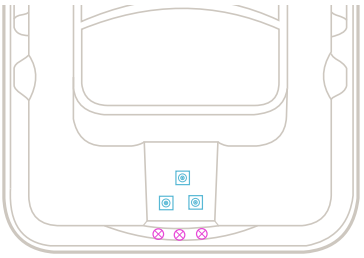


Illustration shows our most popular swim spa Aquagym Max Pro+™ model.

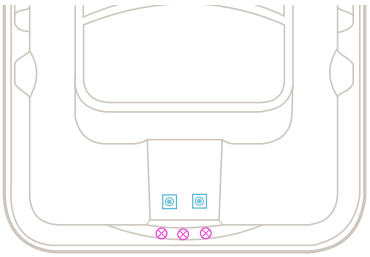
Aquagym Max Extreme™



Aquagym Max Pro+™



Aquagym Max Pro™



Aquagym Max Plunge™

- 140mm Single Spinning Jets
- 140mm Directional Jet
- 100mm Directional Jets
- 40mm Air Jets
- 63mm Directional Jets
- 63mm Twin Spinner Jets
- 100mm Twin Spinner Jets
- Waterfall Jets
- 150mm Swim Jets

* Conditions apply. Specifications may change without notice. Pictures may show options not available on all models.

Vortex™ Spas

Aquagym Max XD™

Jet specifications

Dimensions: 4.46 x 2.30 x 1.5m

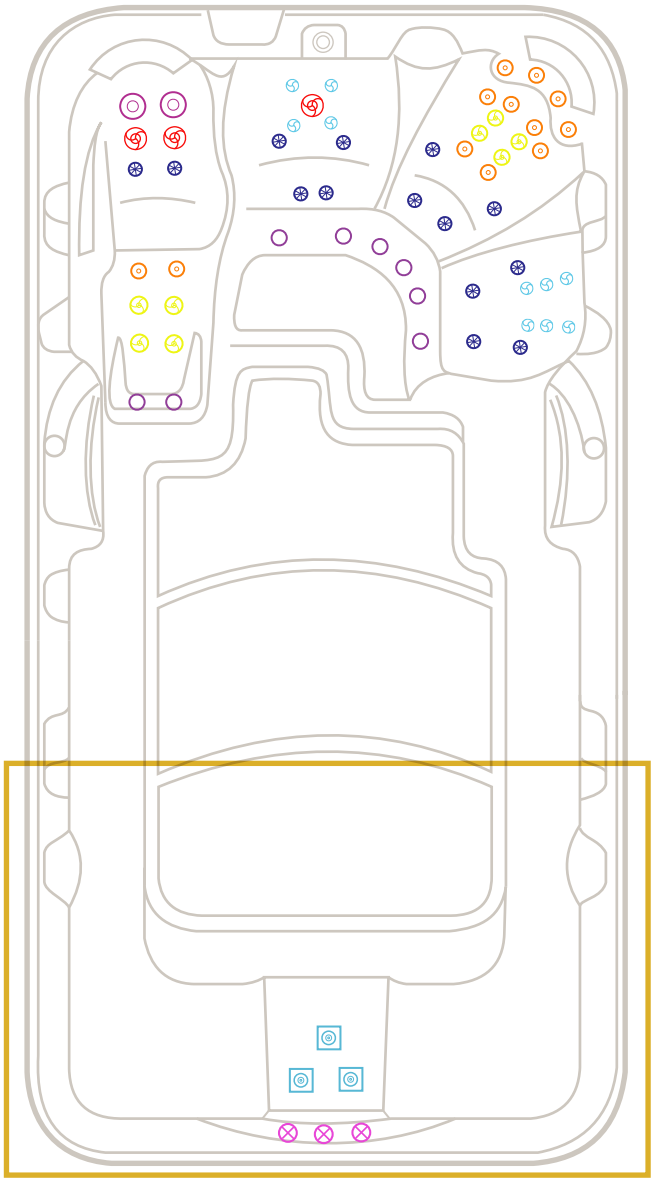
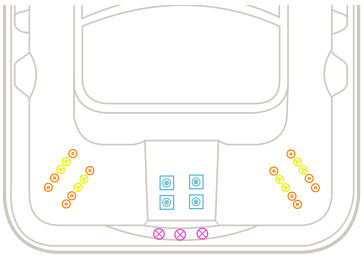
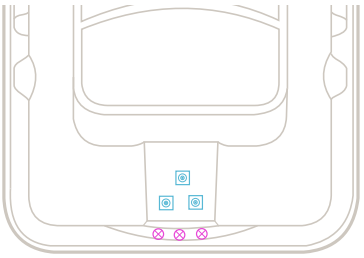


Illustration shows our most popular swim spa Aquagym Max Pro+ XD™ model.

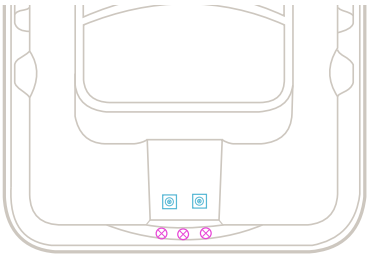
Aquagym Max Extreme XD™



Aquagym Max Pro+ XD™



Aquagym Max Pro XD™



Aquagym Max Plunge XD™

- 140mm Single Spinning Jets
- 140mm Directional Jet
- 100mm Directional Jets
- 40mm Air Jets
- 63mm Directional Jets
- 63mm Twin Spinner Jets
- 100mm Twin Spinner Jets
- Laminar Jets
- 150mm Swim Jets

* Conditions apply. Specifications may change without notice. Pictures may show options not available on all models.

Vortex Spas

Aquagym Max™

Specifications table

	Plunge™	Pro™	Pro Plus™	Extreme™
Water capacity				
Aquagym Max™ 1.3m	6,356L	6,356L	6,356L	6,356L
Aquagym Max XD™ 1.5m	7,075L	7,075L	7,075L	7,075L
Dry weight (Note: The optional ClearLift™ Cover adds 200Kgs to all weights)				
Aquagym Max™ 1.3m	900kg	958kg	1,105kg	1,150kg
Aquagym Max XD™ 1.5m	1,050kg	1,135kg	1,185kg	1,215kg
Filled weight (incl cover) (Note: The optional ClearLift™ Cover adds 200Kgs to all weights)				
Aquagym Max™ 1.3m	7,075kg	7,133kg	7,280kg	7,325kg
Aquagym Max XD™ 1.5m	8,839kg	8,924kg	8,974kg	9,004kg
Lift weight** (Note: The optional ClearLift™ Cover adds 200Kgs to all weights)				
Aquagym Max™ 1.3m	1,550kg**	1,550kg**	1,550kg**	1,550kg**
Aquagym Max XD™ 1.5m	1,650kg**	1,650kg**	1,650kg**	1,650kg**
Intuitive spa controller	SV3	SV3	SV3	SV4
Power cable length	Hardwired by a licensed electrician	Hardwired by a licensed electrician	Hardwired by a licensed electrician	Hardwired by a licensed electrician
Programmable circulation pump	1	1	1	1
Jet pumps	1	2	3	4
Variable speed air blower	1	1	1	1
Variable output heater	5.25kW	5.25kW	5.25kW	5.25kW
Recommended electrical supply	32 amps	32 amps	32 amps	40 amps

** The specified lift weights in the table above include the spa's dry weight, packaging, and hard cover. These are approximate weights and are intended as a guide only. All weights must be checked by the crane operator prior to the lift. (Cranes have the ability to check the weight).

* Conditions apply. Specifications may change without notice. Pictures may show options not available on all models.

Vortex™ Spas

Aquagym Max™

Equipment location

- Equipment Bay
- Keypad
- Conduit Access*
- Drain Valve
- Circulation Pump
- Jet Pump

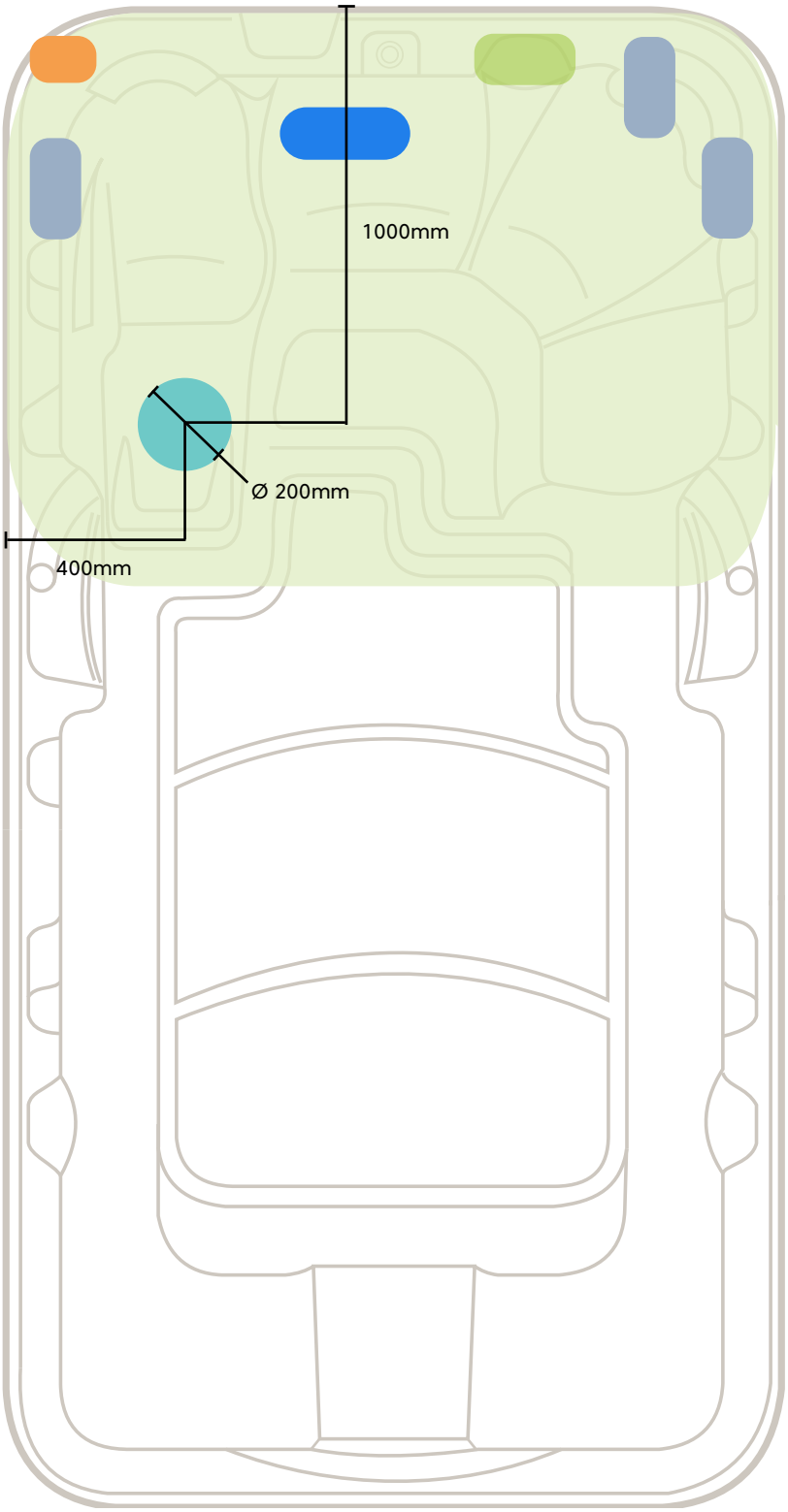


Illustration shows Vortex Aquagym Max Pro Plus™ 1.3m swim spa model

* Conduit should not stick above the concrete slab more than 100mm.

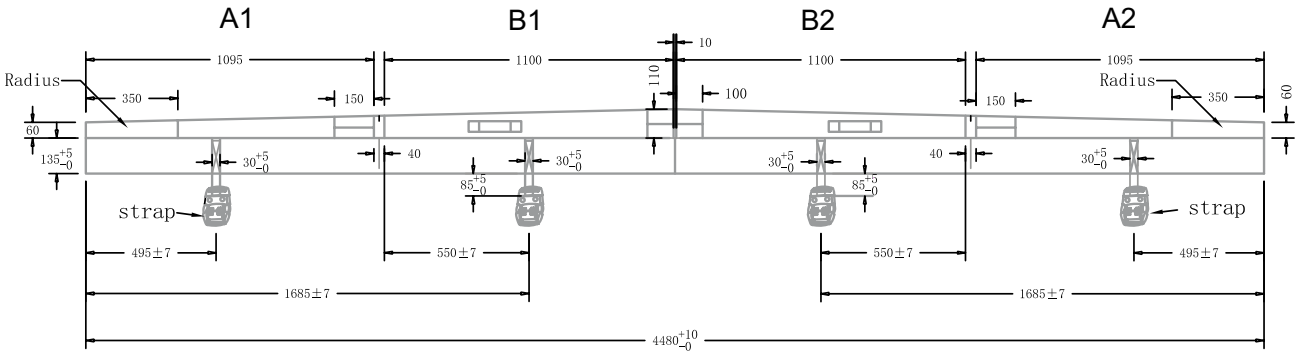
** Optional upgrade only included with the Vortex™ WiFi and Audio Kit.

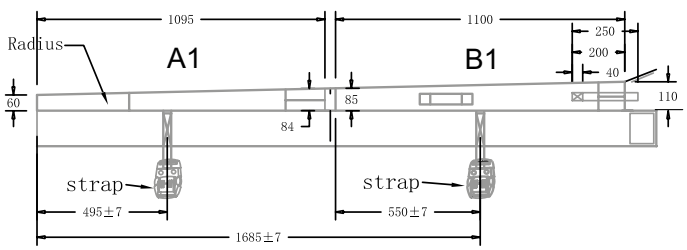
Note: This model has a rigid base, and if you choose to bring the piping conduit in from the bottom through the base, you will need to cut a hole into the base on-site before installation. The factory does not provide this hole. Please see the diagram above to find the location where you can drill the hole.

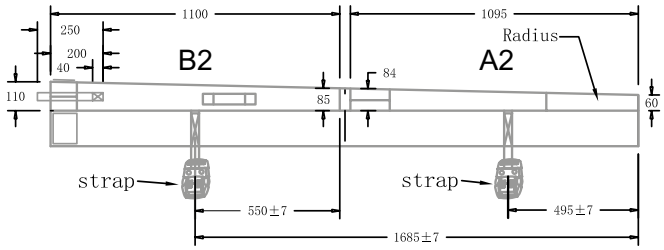
Vortex Spas

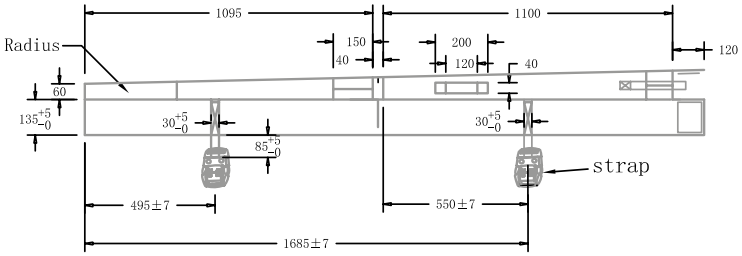
Aquagym Max™

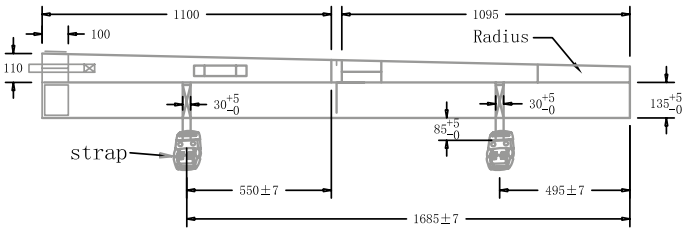
Standard Spa Cover

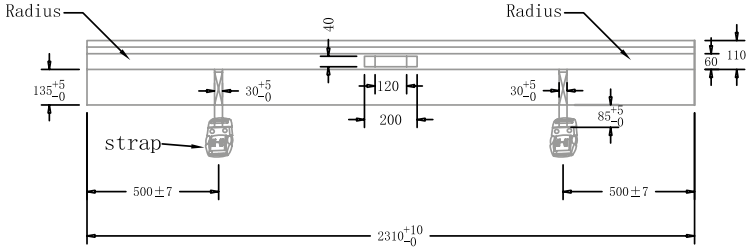








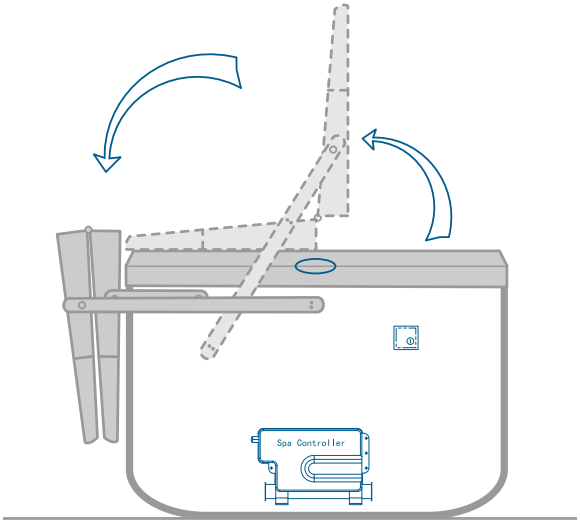




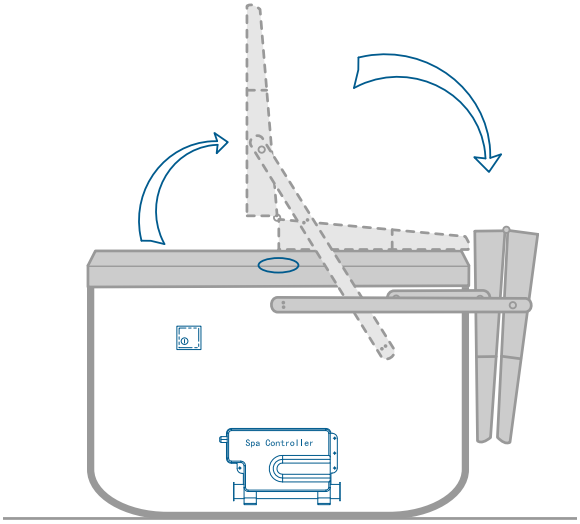
Aquagym Max™

Optional ClearLift™ cover

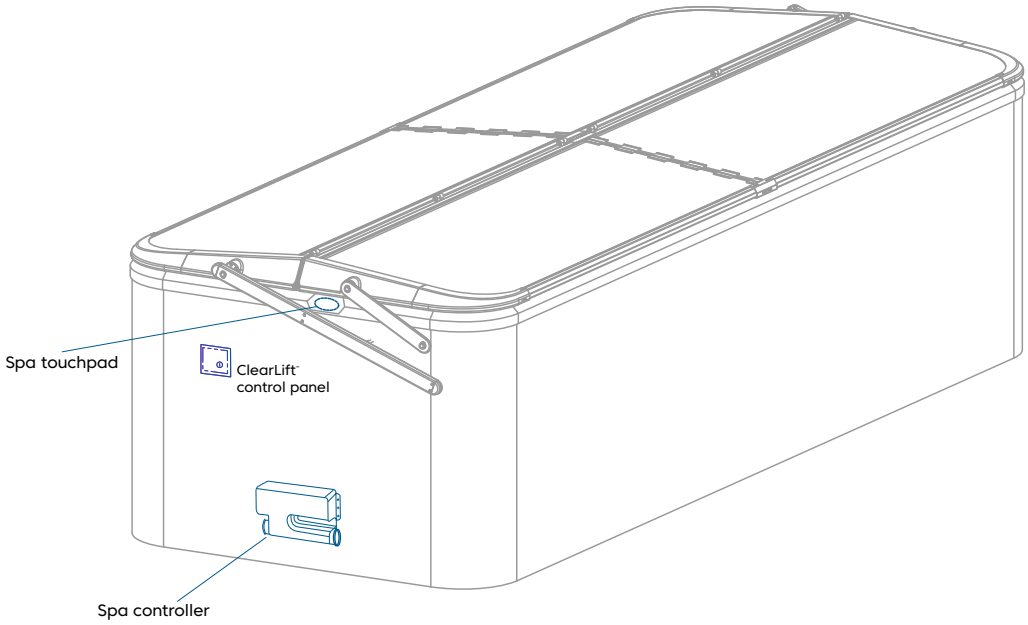
Left-mounted opening



Right-mounted opening



If the ClearLift™ control panel is positioned on the right side of the swim spa, and the ClearLift™ cover folds to the left, it is considered a **Left-Mounted ClearLift™**.
Conversely, if the ClearLift™ control panel is located on the left side of the swim spa, and the ClearLift™ cover folds to the right, it is referred to as a **Right-Mounted ClearLift™**



*The illustration shows **Right-mounted** opening, side angle view.

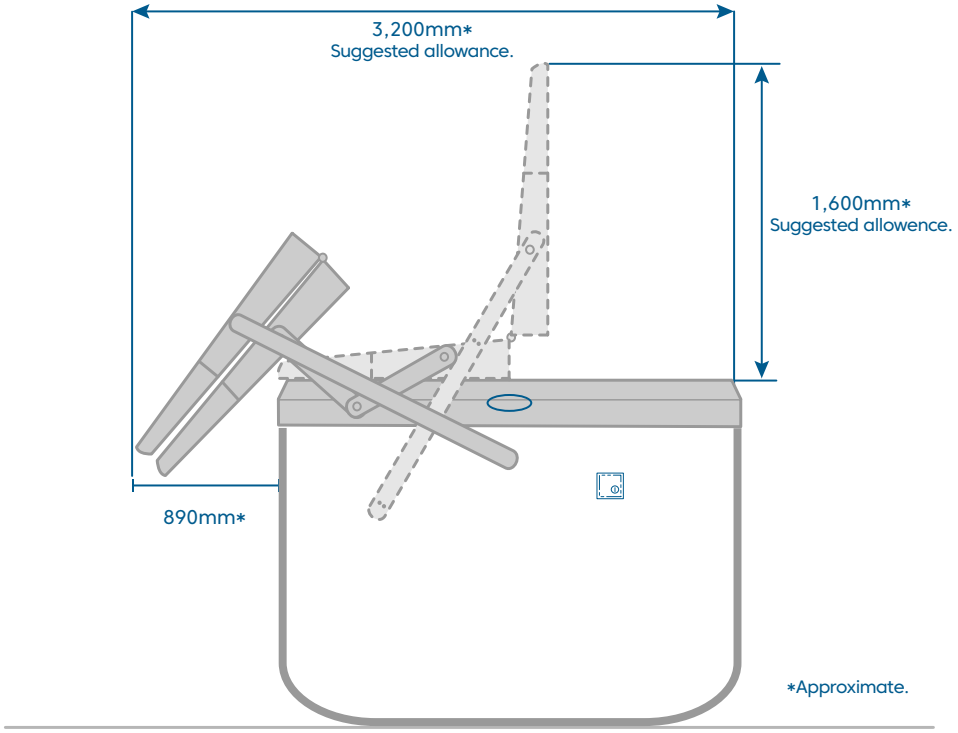
Note: The ClearLift™ control panel is installed at the same end as the swim spa controller keypad.

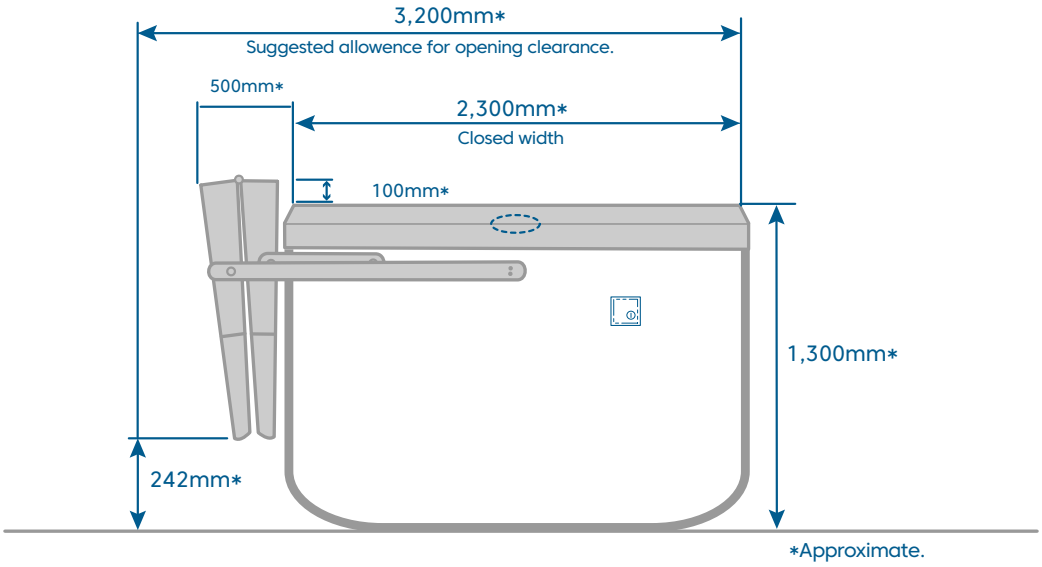
Vortex™ Spas

Aquagym Max™

Optional ClearLift™ cover opening allowance

Left mount, side view shown in Vortex™ swim spas 1,300mm height.



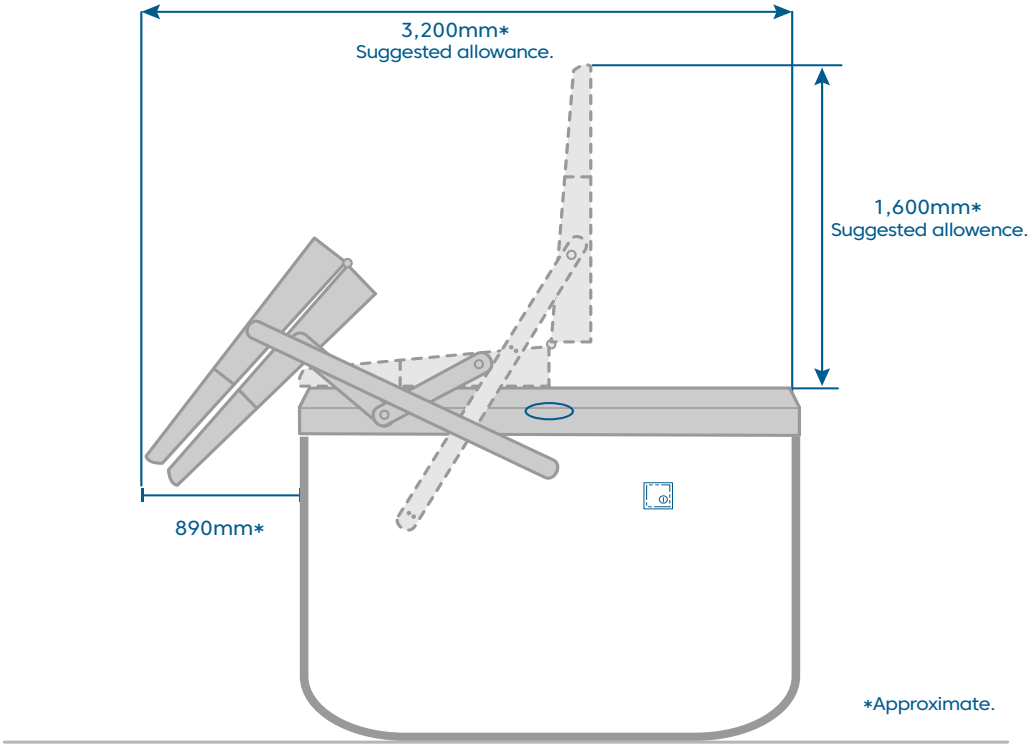


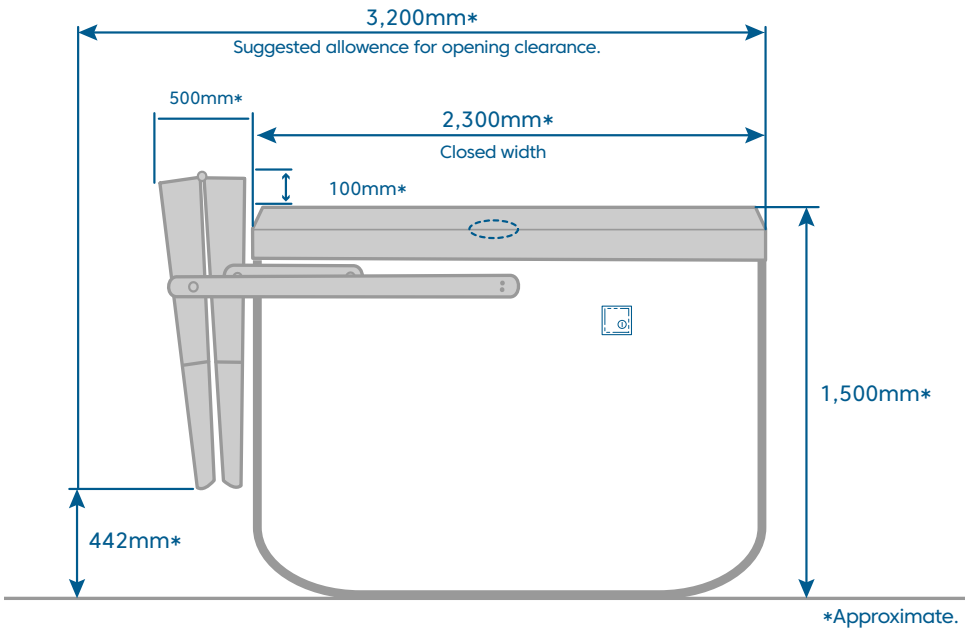
Vortex Spas

Aquagym Max XD™

Optional ClearLift™ cover opening allowance

Left mount, side view shown in Vortex™ swim spas 1,500mm height.





Vortex Spas

Aquagym Max™

Planning details

Please visit the Spa World website for planning information including:

Property access

Electrical information

Service access

Foundations, including generic slab

Pit and deck installation

Optional heat pump installation

Use your Smartphone to scan the QR code for your country:

Australia
spaworld.com.au

Click here to find out more

New Zealand
spaworld.co.nz

Click here to find out more

Vortex™ Spas

Vortex Spas

Vortex Aquagym Max™

Plumbing Approval

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to

TBC

This certificate is issued in relation to the proposed building work at:

TBC

Nature of proposed building work

Plumbing of Proposed Vortex Aquagym Max Plunge Spa

Building classification

Part of building: Spa BCA Classification: 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Water Recirculation matter

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings, computations, specifications, calculations etc.)	Prepared by
2402024-2	06/02/2024	**Plumbing Drawings – Rev. A** *As Nominated on the Sheet Index, Drawing Sheet S000*	Barrason's Group

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC 2022	NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3: Water recirculation systems

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.

Engineer:

Full Name: Andrew Barraclough
Registrations: FIEAUST, CPEng, NER, RBP
Qualifications: BEng MEng PhD
Address: Lvl 2, 2 Pacific Promenade, Pakenham, VIC 3810
Email: admin@barrasons.com.au

Endorsed building engineer area of engineering: Structural
Endorsed building engineer registration no.: PE0000600, RPEQ 22822
Building practitioner registration category and class: C

Signed:
Andrew Barraclough

Date of issue of certificate: 06/02/2024

Form 15 Compliance certificate for building design or specification

Queensland Government

This form is the approved form that must be used in accordance with section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021 (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

Where applicable, the description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address *(include number, street, suburb/locality and postcode)*

TBC

State QLD Postcode

Lot and plan details *(attach list if necessary)*

TBC

Local government area the land is situated in

TBC

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Plumbing of Proposed Vortex Aquagym Max Plunge Spa

Part of building: Spa BCA Classification: 10b

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

Design or part of the design of building work relating to Water Recirculation matter

NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3: Water recirculation systems

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

2402024-2 - Plumbing Drawings – Rev. A
(As Nominated on the Sheet Index, Drawing Sheet S000)

Date : 06/02/2024 Prepared By : B.E.

5. Building certifier reference number and building development application number

Building certifier reference number
NA

Building development application number *(if available)*
NA

6. Appointed competent person details

Under Part 6 of the Building Regulation 2021 a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name *(in full)*
Andrew Saul Barraclough

Company name *(if applicable)*
Barrasons Group

Contact person
Lisa Camp

Business phone number
(03) 5940 2638

Mobile number

Email address
admin@barrasons.com.au

Postal address

State VIC Postcode 3810

Licence class or registration type *(if applicable)*
Managment, Structural

Licence or registration number *(if applicable)*
RPEQ22822

7. Signature of appointed competent person

This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature
Andrew Barraclough

Date
06/02/2024

LOCAL GOVERNMENT USE ONLY

Date received		**Reference number/s**	

SPA WORLD
SPA PLUMBING DRAWINGS
VORTEX SPAS - AQUAGYM MAX PLUNGE

Sheet Index

Layout ID	Layout Name
S000	Title Sheet
S001	General Notes
S101	Spa Plumbing Drawings

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE:
TITLE SHEET

PROJECT :
VORTEX SPAS - AQUAGYM MAX PLUNGE

JOB No: 2402024-2
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S000
REVISION: A

FOR CONSTRUCTION

GENERAL:

G1. ALL CONSTRUCTION WORK AND MATERIALS TO CONFORM WITH THE ENGINEER SPECIFICATION, AND CURRENT BUILDING CODE OF AUSTRALIA AND AUSTRALIAN STANDARDS.

G2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.

G3. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, AND LEVELS SHOWN ARE A.H.D(AUSTRALIAN HT. DATUM)

G4. DRAWINGS ARE NOT TO BE SCALED.RELEVANT DIMENSIONS TO BE CONFIRMED ON SITE BY BUILDER BEFORE COMMENCEMENT OF WORKS.

G5. ANY DISCREPANCIES OR QUERIES SHOULD BE REFERRED TO THE BARRASONS ENGINEERS FOR CLARIFICATIONS PRIOR TO COMMENCEMENT OF WORKS.

G6. THE CONTRACTOR SHALL LIAISE WITH ANY BUILDING/PROPERTY OWNERS AS REQUIRED TO ENSURE MINIMAL DISRUPTIONS TO SERVICES.AND THAT SPECIAL REQUIREMENTS OF THE OWNERS ARE ADHERED TO.

SPA MANUFACTURE :

CONSTRUCTION SEQUENCE :

STEP 1. VACUUM FORM USING 4.75, ARISTECH ACRYLIC SHEET

STEP 2. FIRST COATING 1.5MM - 2MM USING APPROX. 40:60
RATIO (GLASS TO .... RESIN)
FIBERGLASS PRAY UP ROVING : 110P VINYL ESTER RESIN
CATALYST M50 (1.8% - 2%)

STEP 3. OVER CURE AT 35-40 DEGREES CELSIUS

STEP 4. SECOND COATING 4MM - 8MM USING APPROX. 40:60
RATIO (GLASS TO RESIN)
FIBERGLASS PRAY UP ROVING : 290P POLYESTER RESIN
CATALYST 388 (1.8% - 2%)
CALCIUM CARBONATE FILLER ON SECOND LAYER

NOTES :

SWIMMING POOL AND SPA SAFETY TO FOLLOW THE GUIDELINES OF PN-05-2018 PUBLISHED BY VBA.

BARRIERS AND LOCATION OF BARRIERS TO BE DESIGNED TO REQUIREMENTS OF AS 1926.1-2012 AND AS 1926.2-2007, SWIMMING POOL SAFETY - SAFETY BARRIERS FOR SWIMMING POOLS.

DESIGN AND INSTALL POOLS AND SPAS MANUFACTURED FROM FIBRE-REINFORCED PLASTIC MATERIALS, WITH VOLUMES EXCEEDING 7500 AND DEPTHS GREATER THAN 750MM, TO REQUIREMENTS OF AS/NZS 1838:1994, SWIMMING POOLS - PREMOULDED FIBRE-REINFORCED DESIGN AND FABRICATION.

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: GENERAL NOTES

PROJECT : VORTEX SPAS - AQUAGYM MAX PLUNGE

JOB No: 2402024-2
CLIENT: SPA WORLD
SCALE: NTS

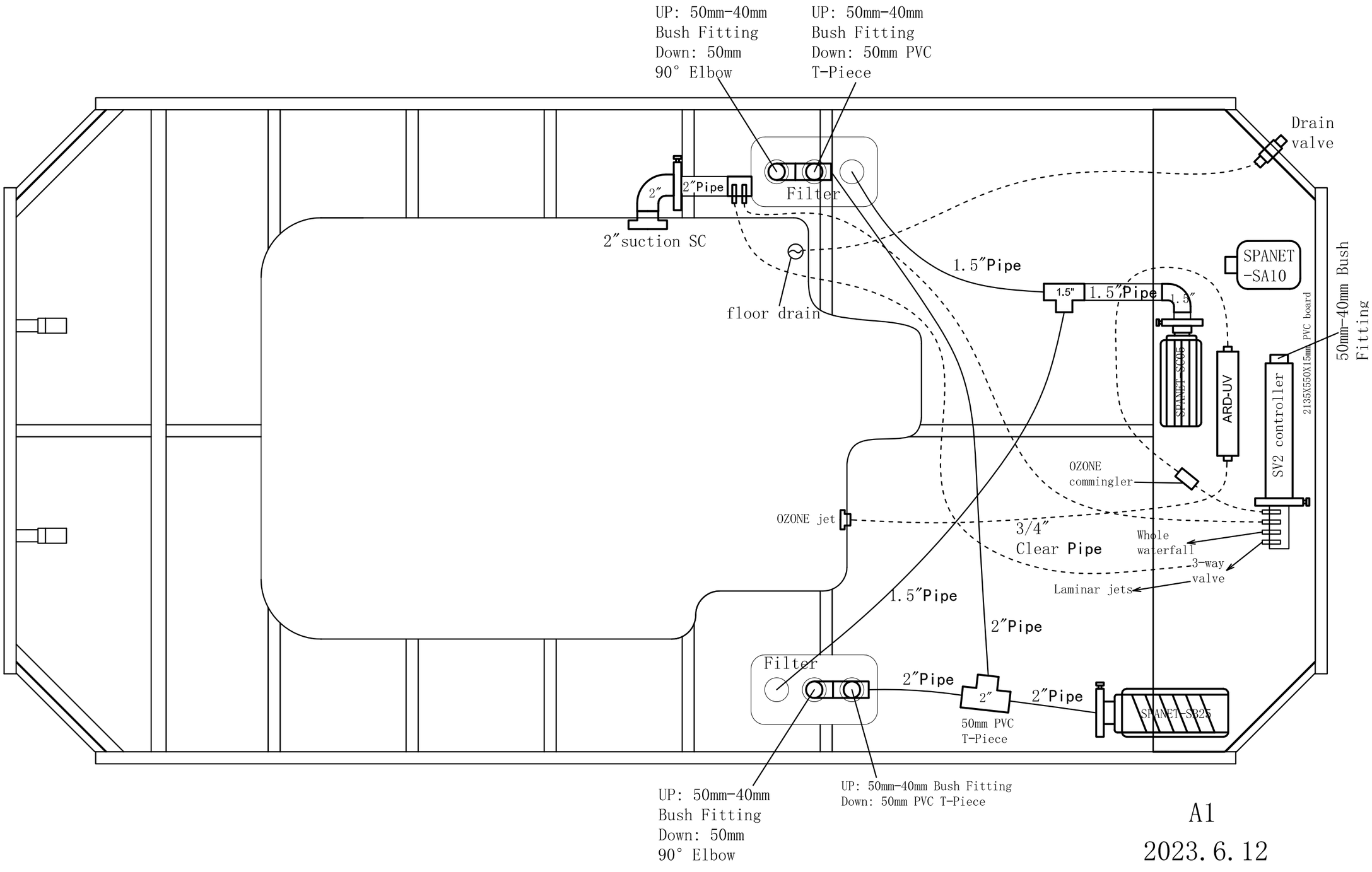
DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S001

REVISION: A

FOR CONSTRUCTION

2023 Aquagym Max Plunge



A1

2023.6.12

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: SPA PLUMBING DRAWINGS

PROJECT : VORTEX SPAS - AQUAGYM MAX PLUNGE

JOB No: 2402024-2
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S101

REVISION: A

FOR CONSTRUCTION

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to

TBC

This certificate is issued in relation to the proposed building work at:

TBC

Nature of proposed building work

Plumbing of Proposed Vortex Aquagym Max Pro Spa

Building classification

Part of building: Spa BCA Classification: 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Water Recirculation matter

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings, computations, specifications, calculations etc.)	Prepared by
2402024-3	06/02/2024	**Plumbing Drawings – Rev. A** *As Nominated on the Sheet Index, Drawing Sheet S000*	Barrason's Group

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC 2022	NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3: Water recirculation systems

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.

Engineer:

Full Name: Andrew Barraclough
Registrations: FIEAUST, CPEng, NER, RBP
Qualifications: BEng MEng PhD
Address: Lvl 2, 2 Pacific Promenade, Pakenham, VIC 3810
Email: admin@barrasons.com.au

Endorsed building engineer area of engineering: Structural
Endorsed building engineer registration no.: PE0000600, RPEQ 22822
Building practitioner registration category and class: C

Signed:
Andrew Barraclough

Date of issue of certificate: 06/02/2024

Form 15 Compliance certificate for building design or specification

Queensland Government

This form is the approved form that must be used in accordance with section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021 (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

Where applicable, the description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address *(include number, street, suburb/locality and postcode)*

TBC

State QLD Postcode

Lot and plan details *(attach list if necessary)*

TBC

Local government area the land is situated in

TBC

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Plumbing of Proposed Vortex Aquagym Max Plunge Spa

Part of building: Spa BCA Classification: 10b

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

Design or part of the design of building work relating to Water Recirculation matter

NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3:
Water recirculation systems

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

2402024-2 - Plumbing Drawings – Rev. A
(As Nominated on the Sheet Index, Drawing Sheet S000)

Date : 06/02/2024 Prepared By : B.E.

5. Building certifier reference number and building development application number

Building certifier reference number
NA

Building development application number *(if available)*
NA

6. Appointed competent person details

Under Part 6 of the Building Regulation 2021 a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name *(in full)*
Andrew Saul Barraclough

Company name *(if applicable)*
Barrasons Group

Contact person
Lisa Camp

Business phone number
(03) 5940 2638

Mobile number

Email address
admin@barrasons.com.au

Postal address

State VIC Postcode 3810

Licence class or registration type *(if applicable)*
Managment, Structural

Licence or registration number *(if applicable)*
RPEQ22822

7. Signature of appointed competent person

This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature


Date
06/02/2024

LOCAL GOVERNMENT USE ONLY

Date received		**Reference number/s**	

SPA WORLD
SPA PLUMBING DRAWINGS
VORTEX SPAS - AQUAGYM MAX PRO

Sheet Index

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE:
TITLE SHEET

PROJECT :
VORTEX SPAS - AQUAGYM MAX PRO

JOB No: 2402024-3
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S000
REVISION: A

FOR CONSTRUCTION

GENERAL:

G1. ALL CONSTRUCTION WORK AND MATERIALS TO CONFORM WITH THE ENGINEER SPECIFICATION, AND CURRENT BUILDING CODE OF AUSTRALIA AND AUSTRALIAN STANDARDS.

G2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.

G3. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, AND LEVELS SHOWN ARE A.H.D(AUSTRALIAN HT. DATUM)

G4. DRAWINGS ARE NOT TO BE SCALED.RELEVANT DIMENSIONS TO BE CONFIRMED ON SITE BY BUILDER BEFORE COMMENCEMENT OF WORKS.

G5. ANY DISCREPANCIES OR QUERIES SHOULD BE REFERRED TO THE BARRASONS ENGINEERS FOR CLARIFICATIONS PRIOR TO COMMENCEMENT OF WORKS.

G6. THE CONTRACTOR SHALL LIAISE WITH ANY BUILDING/PROPERTY OWNERS AS REQUIRED TO ENSURE MINIMAL DISRUPTIONS TO SERVICES.AND THAT SPECIAL REQUIREMENTS OF THE OWNERS ARE ADHERED TO.

SPA MANUFACTURE :

CONSTRUCTION SEQUENCE :

STEP 1. VACUUM FORM USING 4.75, ARISTECH ACRYLIC SHEET

STEP 2. FIRST COATING 1.5MM - 2MM USING APPROX. 40:60
RATIO (GLASS TO .... RESIN)
FIBERGLASS PRAY UP ROVING : 110P VINYL ESTER RESIN
CATALYST M50 (1.8% - 2%)

STEP 3. OVER CURE AT 35-40 DEGREES CELSIUS

STEP 4. SECOND COATING 4MM - 8MM USING APPROX. 40:60
RATIO (GLASS TO RESIN)
FIBERGLASS PRAY UP ROVING : 290P POLYESTER RESIN
CATALYST 388 (1.8% - 2%)
CALCIUM CARBONATE FILLER ON SECOND LAYER

NOTES :

SWIMMING POOL AND SPA SAFETY TO FOLLOW THE GUIDELINES OF PN-05-2018 PUBLISHED BY VBA.

BARRIERS AND LOCATION OF BARRIERS TO BE DESIGNED TO REQUIREMENTS OF AS 1926.1-2012 AND AS 1926.2-2007, SWIMMING POOL SAFETY - SAFETY BARRIERS FOR SWIMMING POOLS.

DESIGN AND INSTALL POOLS AND SPAS MANUFACTURED FROM FIBRE-REINFORCED PLASTIC MATERIALS, WITH VOLUMES EXCEEDING 7500 AND DEPTHS GREATER THAN 750MM, TO REQUIREMENTS OF AS/NZS 1838:1994, SWIMMING POOLS - PREMOULDED FIBRE-REINFORCED DESIGN AND FABRICATION.

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: GENERAL NOTES

PROJECT : VORTEX SPAS - AQUAGYM MAX PRO

JOB No: 2402024-3
CLIENT: SPA WORLD
SCALE: NTS

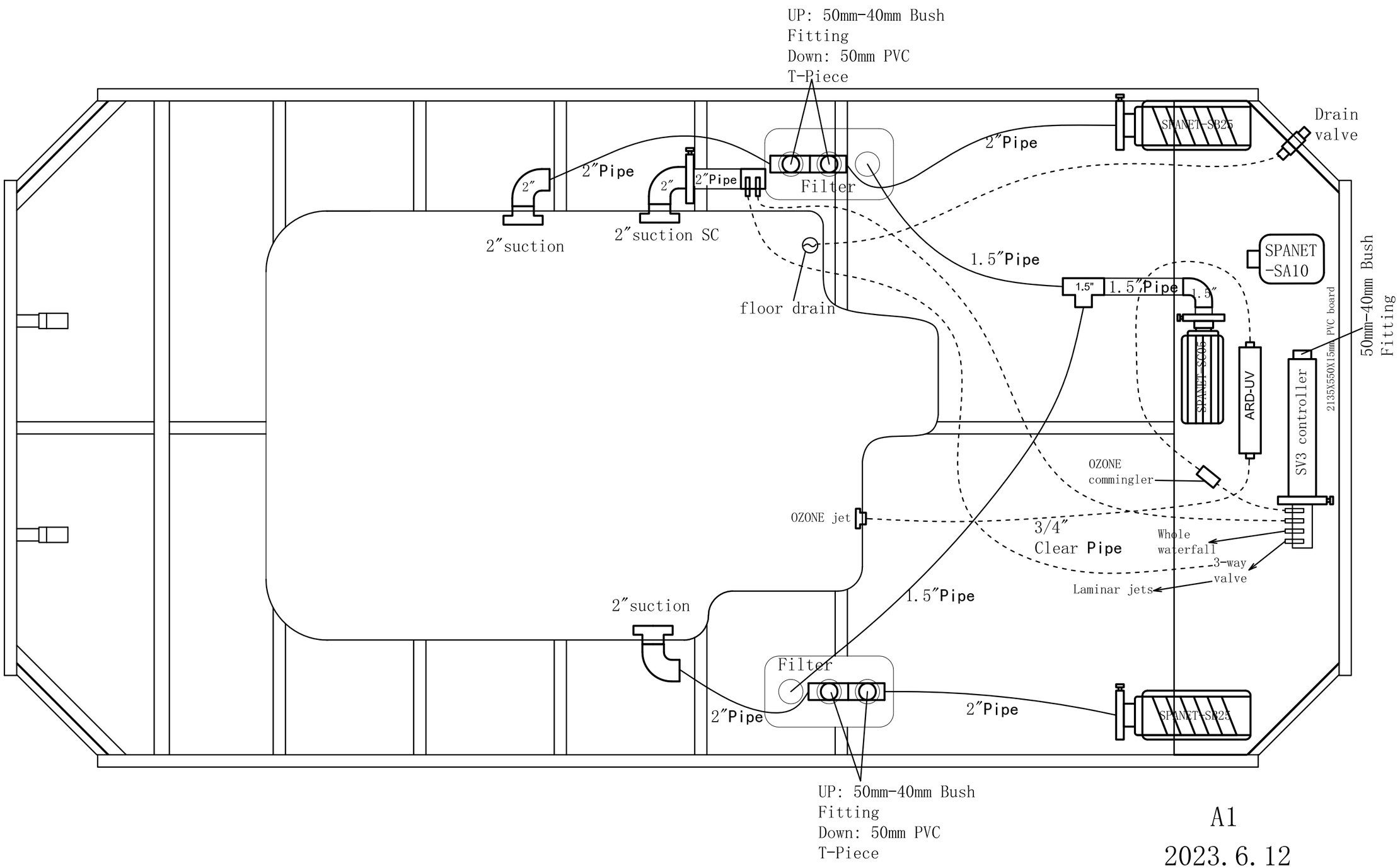
DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S001

REVISION: A

FOR CONSTRUCTION

2023 Aquagym Max Pro



A1

2023.6.12

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: SPA PLUMBING DRAWINGS	PROJECT : VORTEX SPAS - AQUAGYM MAX PRO	JOB No: 2402024-3	DRAWN: F.N.	DWG No:	S101
		CLIENT: SPA WORLD	CHECKED: B.E.		FOR CONSTRUCTION
		SCALE: NTS	APPROVED: B.E.	REVISION:	A

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to

TBC

This certificate is issued in relation to the proposed building work at:

TBC

Nature of proposed building work

Plumbing of Proposed Vortex Aquagym Max Pro Plus Spa

Building classification

Part of building: Spa BCA Classification: 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Water Recirculation matter

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings, computations, specifications, calculations etc.)	Prepared by
2402024-4	06/02/2024	**Plumbing Drawings – Rev. A** *As Nominated on the Sheet Index, Drawing Sheet S000*	Barrason's Group

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC 2022	NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3: Water recirculation systems

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.

Engineer:

Full Name: Andrew Barraclough
Registrations: FIEAUST, CPEng, NER, RBP
Qualifications: BEng MEng PhD
Address: Lvl 2, 2 Pacific Promenade, Pakenham, VIC 3810
Email: admin@barrasons.com.au

Endorsed building engineer area of engineering: Structural
Endorsed building engineer registration no.: PE0000600, RPEQ 22822
Building practitioner registration category and class: C

Signed:
Andrew Barraclough

Date of issue of certificate: 06/02/2024

Form 15 Compliance certificate for building design or specification

Queensland Government

This form is the approved form that must be used in accordance with section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021 (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

Where applicable, the description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address *(include number, street, suburb/locality and postcode)*

TBC

State QLD Postcode

Lot and plan details *(attach list if necessary)*

TBC

Local government area the land is situated in

TBC

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Plumbing of Proposed Vortex Aquagym Max Plunge Spa

Part of building: Spa BCA Classification: 10b

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

Design or part of the design of building work relating to Water Recirculation matter

NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3:
Water recirculation systems

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

2402024-2 - Plumbing Drawings – Rev. A
(As Nominated on the Sheet Index, Drawing Sheet S000)

Date : 06/02/2024 Prepared By : B.E.

5. Building certifier reference number and building development application number

Building certifier reference number
NA

Building development application number *(if available)*
NA

6. Appointed competent person details

Under Part 6 of the Building Regulation 2021 a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name *(in full)*
Andrew Saul Barraclough

Company name *(if applicable)*
Barrasons Group

Contact person
Lisa Camp

Business phone number
(03) 5940 2638

Mobile number

Email address
admin@barrasons.com.au

Postal address

State VIC Postcode 3810

Licence class or registration type *(if applicable)*
Managment, Structural

Licence or registration number *(if applicable)*
RPEQ22822

7. Signature of appointed competent person

This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature


Date
06/02/2024

LOCAL GOVERNMENT USE ONLY

Date received		**Reference number/s**	

SPA WORLD
SPA PLUMBING DRAWINGS
VORTEX SPAS - AQUAGYM MAX PRO PLUS

Sheet Index

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE:
TITLE SHEET

PROJECT :
VORTEX SPAS - AQUAGYM MAX PRO PLUS

JOB No: 2402024-4
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S000
REVISION: A

FOR CONSTRUCTION

GENERAL:

G1. ALL CONSTRUCTION WORK AND MATERIALS TO CONFORM WITH THE ENGINEER SPECIFICATION, AND CURRENT BUILDING CODE OF AUSTRALIA AND AUSTRALIAN STANDARDS.

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SPA MANUFACTURE :

CONSTRUCTION SEQUENCE :

STEP 1. VACUUM FORM USING 4.75, ARISTECH ACRYLIC SHEET

STEP 2. FIRST COATING 1.5MM - 2MM USING APPROX. 40:60
RATIO (GLASS TO .... RESIN)
FIBERGLASS PRAY UP ROVING : 110P VINYL ESTER RESIN
CATALYST M50 (1.8% - 2%)

STEP 3. OVER CURE AT 35-40 DEGREES CELSIUS

STEP 4. SECOND COATING 4MM - 8MM USING APPROX. 40:60
RATIO (GLASS TO RESIN)
FIBERGLASS PRAY UP ROVING : 290P POLYESTER RESIN
CATALYST 388 (1.8% - 2%)
CALCIUM CARBONATE FILLER ON SECOND LAYER

NOTES :

SWIMMING POOL AND SPA SAFETY TO FOLLOW THE GUIDELINES OF PN-05-2018 PUBLISHED BY VBA.

BARRIERS AND LOCATION OF BARRIERS TO BE DESIGNED TO REQUIREMENTS OF AS 1926.1-2012 AND AS 1926.2-2007, SWIMMING POOL SAFETY - SAFETY BARRIERS FOR SWIMMING POOLS.

DESIGN AND INSTALL POOLS AND SPAS MANUFACTURED FROM FIBRE-REINFORCED PLASTIC MATERIALS, WITH VOLUMES EXCEEDING 7500 AND DEPTHS GREATER THAN 750MM, TO REQUIREMENTS OF AS/NZS 1838:1994, SWIMMING POOLS - PREMOULDED FIBRE-REINFORCED DESIGN AND FABRICATION.

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: GENERAL NOTES

PROJECT : VORTEX SPAS - AQUAGYM MAX PRO PLUS

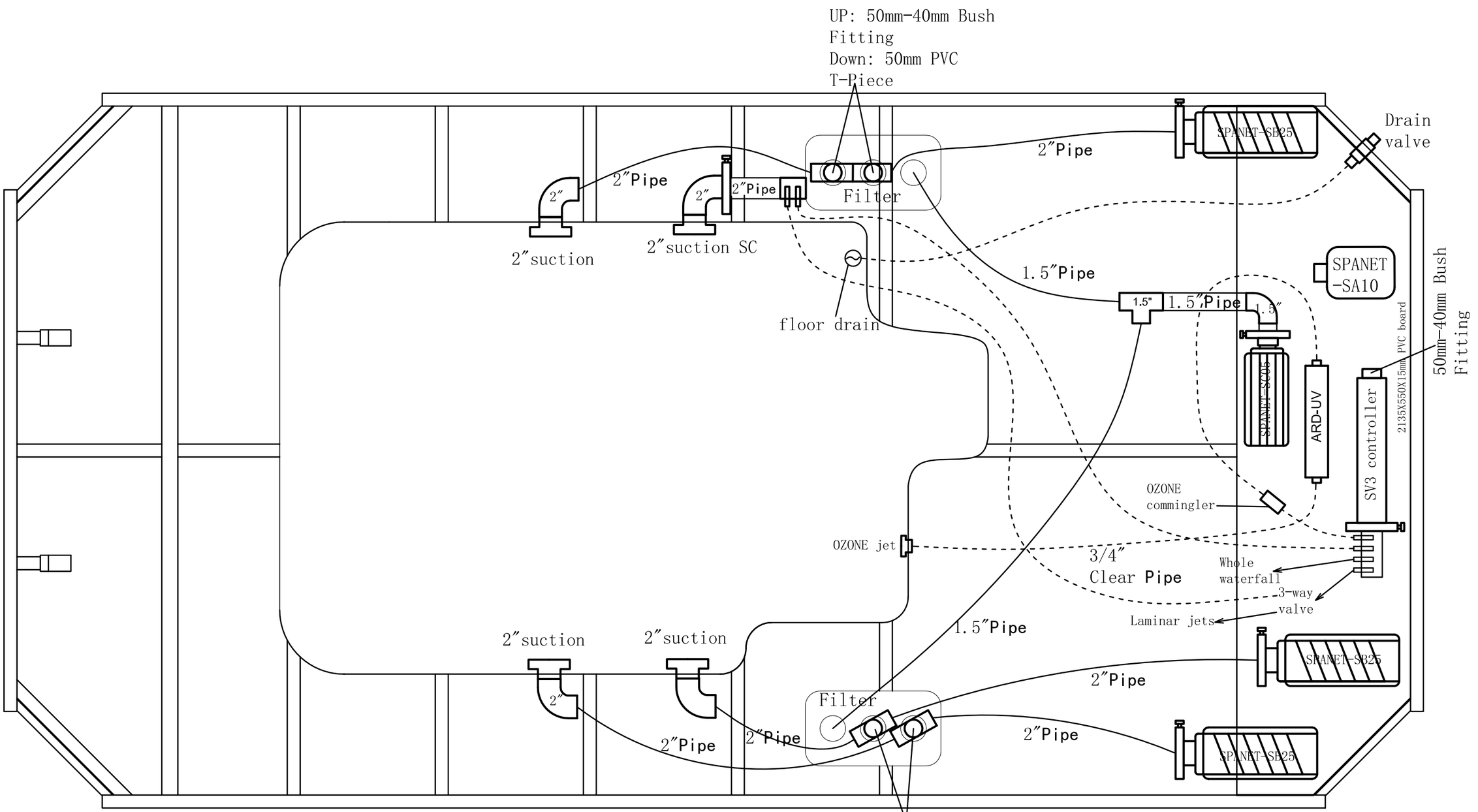
JOB No: 2402024-4
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S001
REVISION: A

FOR CONSTRUCTION

2023 Aquagym Max Pro+



A2

2023.6.12

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: SPA PLUMBING DRAWINGS	PROJECT : VORTEX SPAS - AQUAGYM MAX PRO PLUS	JOB No: 2402024-4	DRAWN: F.N.	DWG No:	S101
		CLIENT: SPA WORLD	CHECKED: B.E.		
		SCALE: NTS	APPROVED: B.E.	REVISION:	A

FOR CONSTRUCTION

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to

TBC

This certificate is issued in relation to the proposed building work at:

TBC

Nature of proposed building work

Plumbing of Proposed Vortex Aquagym Max Extreme Spa

Building classification

Part of building: Spa BCA Classification: 10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to Water Recirculation matter

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings, computations, specifications, calculations etc.)	Prepared by
2402024-1	06/02/2024	**Plumbing Drawings – Rev. A** *As Nominated on the Sheet Index, Drawing Sheet S000*	Barrason's Group

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
NCC 2022	NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3: Water recirculation systems

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.

Engineer:

Full Name: Andrew Barraclough
Registrations: FIEAUST, CPEng, NER, RBP
Qualifications: BEng MEng PhD
Address: Lvl 2, 2 Pacific Promenade, Pakenham, VIC 3810
Email: admin@barrasons.com.au

Endorsed building engineer area of engineering: Structural
Endorsed building engineer registration no.: PE0000600, RPEQ 22822
Building practitioner registration category and class: C

Signed:
Andrew Barraclough

Date of issue of certificate: 06/02/2024

Form 15 Compliance certificate for building design or specification

Queensland Government

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If the plan is not registered by title, provide previous lot and plan details.

Street address *(include number, street, suburb/locality and postcode)*

TBC

State QLD Postcode

Lot and plan details *(attach list if necessary)*

TBC

Local government area the land is situated in

TBC

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Plumbing of Proposed Vortex Aquagym Max Plunge Spa

Part of building: Spa BCA Classification: 10b

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

Design or part of the design of building work relating to Water Recirculation matter

NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3:
Water recirculation systems

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

2402024-2 - Plumbing Drawings – Rev. A
(As Nominated on the Sheet Index, Drawing Sheet S000)

Date : 06/02/2024 Prepared By : B.E.

5. Building certifier reference number and building development application number

Building certifier reference number
NA

Building development application number *(if available)*
NA

6. Appointed competent person details

Under Part 6 of the Building Regulation 2021 a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name *(in full)*
Andrew Saul Barraclough

Company name *(if applicable)*
Barrasons Group

Contact person
Lisa Camp

Business phone number
(03) 5940 2638

Mobile number

Email address
admin@barrasons.com.au

Postal address

State VIC Postcode 3810

Licence class or registration type *(if applicable)*
Managment, Structural

Licence or registration number *(if applicable)*
RPEQ22822

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This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature


Date
06/02/2024

LOCAL GOVERNMENT USE ONLY

Date received		**Reference number/s**	

SPA WORLD
SPA PLUMBING DRAWINGS
VORTEX SPAS - AQUAGYM MAX EXTREME

Sheet Index

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE:
TITLE SHEET

PROJECT :
VORTEX SPAS - AQUAGYM MAX EXTREME

JOB No: 2402024-1
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S000
REVISION: A

FOR CONSTRUCTION

GENERAL:

G1. ALL CONSTRUCTION WORK AND MATERIALS TO CONFORM WITH THE ENGINEER SPECIFICATION, AND CURRENT BUILDING CODE OF AUSTRALIA AND AUSTRALIAN STANDARDS.

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SPA MANUFACTURE :

CONSTRUCTION SEQUENCE :

STEP 1. VACUUM FORM USING 4.75, ARISTECH ACRYLIC SHEET

STEP 2. FIRST COATING 1.5MM - 2MM USING APPROX. 40:60
RATIO (GLASS TO .... RESIN)
FIBERGLASS PRAY UP ROVING : 110P VINYL ESTER RESIN
CATALYST M50 (1.8% - 2%)

STEP 3. OVER CURE AT 35-40 DEGREES CELSIUS

STEP 4. SECOND COATING 4MM - 8MM USING APPROX. 40:60
RATIO (GLASS TO RESIN)
FIBERGLASS PRAY UP ROVING : 290P POLYESTER RESIN
CATALYST 388 (1.8% - 2%)
CALCIUM CARBONATE FILLER ON SECOND LAYER

NOTES :

SWIMMING POOL AND SPA SAFETY TO FOLLOW THE GUIDELINES OF PN-05-2018 PUBLISHED BY VBA.

BARRIERS AND LOCATION OF BARRIERS TO BE DESIGNED TO REQUIREMENTS OF AS 1926.1-2012 AND AS 1926.2-2007, SWIMMING POOL SAFETY - SAFETY BARRIERS FOR SWIMMING POOLS.

DESIGN AND INSTALL POOLS AND SPAS MANUFACTURED FROM FIBRE-REINFORCED PLASTIC MATERIALS, WITH VOLUMES EXCEEDING 7500 AND DEPTHS GREATER THAN 750MM, TO REQUIREMENTS OF AS/NZS 1838:1994, SWIMMING POOLS - PREMOULDED FIBRE-REINFORCED DESIGN AND FABRICATION.

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: GENERAL NOTES

PROJECT : VORTEX SPAS - AQUAGYM MAX EXTREME

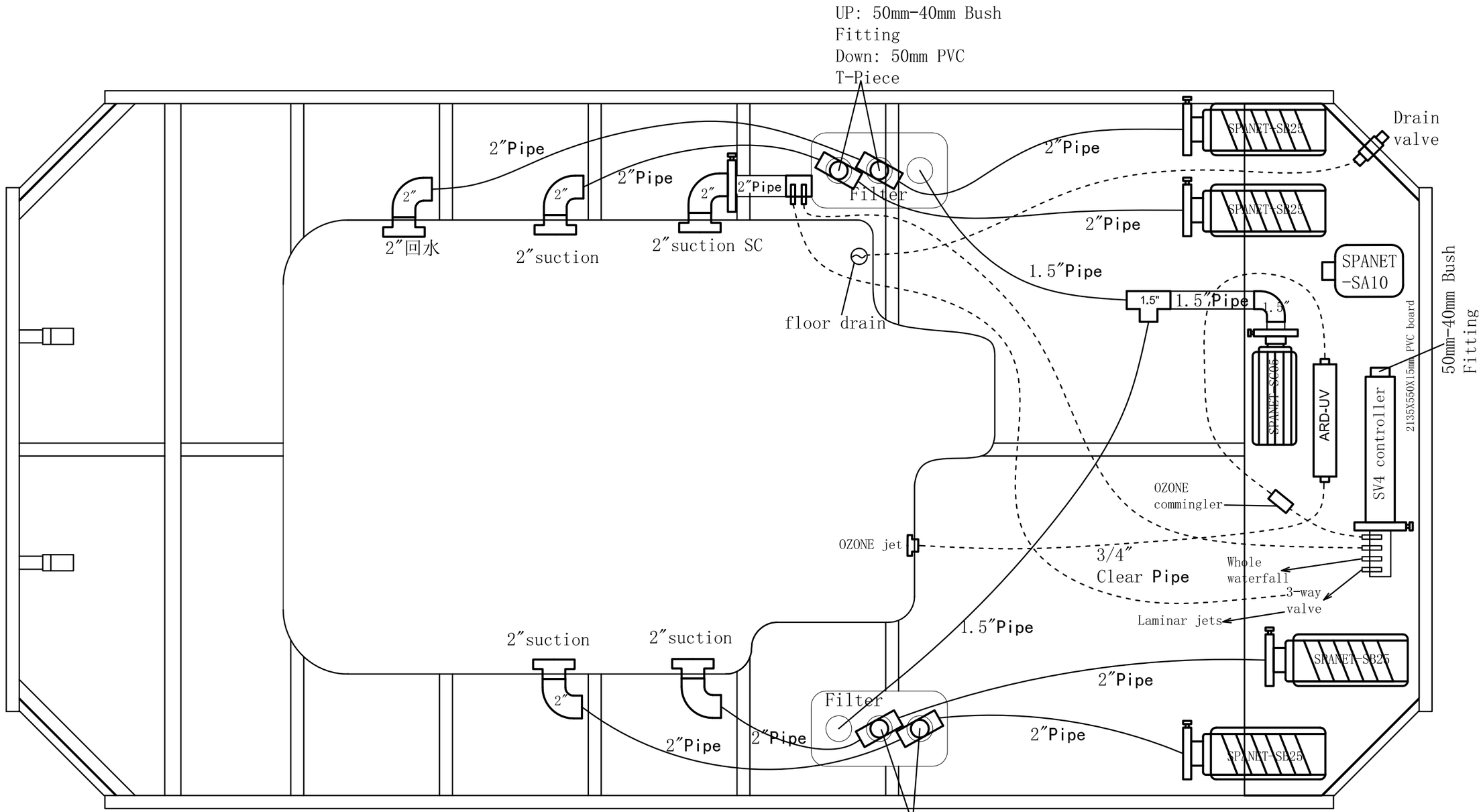
JOB No: 2402024-1
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S001
REVISION: A

FOR CONSTRUCTION

2023 Aquagym Max Extreme



A1

2023.6.12

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	06.02.2024

Barrason's Group
E: admin@barrasons.com.au
T: (03) 5940 2638
W: www.barrasons.com.au

TITLE: SPA PLUMBING DRAWINGS

PROJECT : VORTEX SPAS - AQUAGYM MAX EXTREME

JOB No: 2402024-1
CLIENT: SPA WORLD
SCALE: NTS

DRAWN: F.N.
CHECKED: B.E.
APPROVED: B.E.

DWG No: S101

REVISION: A

FOR CONSTRUCTION

Vortex Spas

Vortex Aquagym Max™

Structural Certificate

Building Act 1993
Section 238(1)(a)
Building Regulations 2018
Regulation 126

CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to

The Relevant Building Surveyor

This certificate is issued in relation to the proposed building work at:

TBC

Nature of proposed building work

Construction of Proposed Vortex Spa - Aquagym Plunge / Aquagym Pro / Aquagym Pro Plus / Aquagym Extreme

Building classification

Part of building: SPA BCA Classification 10b

Prescribed class of building work for which this certificate is issued:

Design or part of the design of building work relating to Structural matter

Documents setting out the design that is certified by this certificate

Document no.	Document date	Type of document (e.g. drawings, computations, specifications, calculations etc.)	Prepared by
2211225.1	24/11/2022	**Structural Drawings – Rev. A**	Barrason's Group

The design certified by this certificate complies with the following provisions of Building Act 1993, Building Regulations 2018 or National Construction Code

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
BCA/NCC 2022	Part 2.1, 3.0, 3.2, 3.4 of the NCC Vol. 2-2022 amendment 1 including relevant Australian Standards: AS1170.0, AS/NZ1170.1-2002, AS/NZ1170.2-2011, AS1684.2 AS1684.4, AS1720.1, AS2870, AS3600, AS3700, AS3850, AS4100, AS4055, AS4671, AS4773.1

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.

Engineer:

Full Name: Andrew Barraclough
Registrations: FIEAUST, CPEng, NER, RBP
Qualifications: BEng MEng PhD
Address: Lvl 2, 2 Pacific Promenade, Pakenham, VIC 3810
Email: admin@barrasons.com.au

Endorsed building engineer area of engineering: Structural
Endorsed building engineer registration no.: PE0000600, RPEQ 22822

Signed:
Andrew Barraclough

Date of issue of certificate: 26/03/2024

Form 15 Compliance certificate for building design or specification

Queensland Government

This form is the approved form that must be used in accordance with section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021 (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

Where applicable, the description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address *(include number, street, suburb/locality and postcode)*

TBC

State QLD Postcode

Lot and plan details *(attach list if necessary)*

TBC

Local government area the land is situated in

TBC

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Plumbing of Proposed Vortex Aquagym Max Plunge Spa

Part of building: Spa BCA Classification: 10b

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

Design or part of the design of building work relating to Water Recirculation matter

NCC 2022 Volume 2 AS 1926.3-2010 Swimming Pool Safety Part 3:
Water recirculation systems

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

2402024-2 - Plumbing Drawings – Rev. A
(As Nominated on the Sheet Index, Drawing Sheet S000)

Date : 06/02/2024 Prepared By : B.E.

5. Building certifier reference number and building development application number

Building certifier reference number
NA

Building development application number *(if available)*
NA

6. Appointed competent person details

Under Part 6 of the Building Regulation 2021 a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name *(in full)*
Andrew Saul Barraclough

Company name *(if applicable)*
Barrasons Group

Contact person
Lisa Camp

Business phone number
(03) 5940 2638

Mobile number

Email address
admin@barrasons.com.au

Postal address

State VIC Postcode 3810

Licence class or registration type *(if applicable)*
Managment, Structural

Licence or registration number *(if applicable)*
RPEQ22822

7. Signature of appointed competent person

This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature


Date
06/02/2024

LOCAL GOVERNMENT USE ONLY

Date received		**Reference number/s**	

Appendix – explanatory information

IMPORTANT NOTE: it is an offence for a competent person to give a building certifier a document, including this form, that the person knows or reasonably suspects, is false or misleading.

Who can complete this certificate? (section 10 of the *Building Act 1975* (Building Act) and sections 73 and 77 of Building Regulation 2021 (BR 2021))
A building certifier can accept from a competent person (design-specification) a certificate stating that the competent person has assessed the building design or specification for the aspect of building work, and it will, if installed or carried out under the certificate, comply with the building assessment provisions, including any relevant standards and codes.

Schedule 10 of the BR 2021 defines *building design or specification* as any material, system, method of building or other thing related to the design of or specifications for building work.

When completing the certificate, a competent person is required under section 77 of the BR 2021 to include the basis for giving the certificate and state the extent to which the competent person has relied on tests, specifications, rules, standards, codes of practice or other publications.

What is the purpose of this form? (section 10 of the Building Act and sections 73 and 77 of the BR 2021)
The information in this form informs the building certifier's decision making when they are assessing a building development application, issuing the building development approval for the building work the subject of the certificate (form) and when amending the building development approval due to the receipt of updated aspect information such as glazing or truss specifications or revised excavation drawings.

Can a manufacturer or supplier give this Form 15?
A building certifier can accept this form from a manufacturer or supplier who the certifier has decided is a competent person (design-specification).

A manufacturer or supplier of building materials can give this form if they have undertaken the design component for the product. For example a window manufacturer who designs, constructs and supplies the windows to industry could give this form.

Competent person (section 10 of the Building Act 1975 and Part 6 of the BR 2021)
A building certifier must assess and decide to appoint an individual as a competent person before they can accept design-specification help.

When deciding whether a person can be a competent person, the building certifier must assess the person having regard to their experience, qualifications and skills and ensure the person holds a licence or registration if required.

The building certifier is required to keep detailed records about what was considered when appointing a competent person.

For further information about assessment of someone as a competent person refer to the **Guideline for the assessment of competent persons.**

What is required if a manufacturer or supplier did not do the design work for the product?
A manufacturer or supplier who is not part of the design process may give the construction contractor, builder, competent person or the building certifier evidence of suitability such as a product technical statement under Part A5 of the Building Code of Australia (BCA), for an aspect or material stating that it is compliant with the relevant reference documents in the BCA i.e. the applicable Australian Standard/s.

What if there is not enough space for all the supporting material/documents?
Items 2, 3 and 4 requires the competent person to clearly identify the extent of the assessment that was undertaken for aspect/s of work identified in this form.

For instance, there is provision for material such as specifications, standards, codes or other relevant publications to be referenced in the form. However, if the space in the form is not sufficient to accommodate all of this material, you can create and refer to additional material in an addendum or attachment to the form.

The form is also available in a Microsoft Word version, that you can download and edit to include additional material in the relevant parts of the form. Note that editing the form in the Microsoft Word version may cause the relevant boxes to expand and increase the length of the document. This is acceptable and does not change the approved form, provided the section text (description on the left-hand side of the page) is not altered.

Appointed competent person (design or specification) – (sections 34 and 36 of the BR 2021)
A building certifier must assess and decide to appoint an individual as a competent person before they can, as a competent person, give design-specification help. The building certifier is required to keep detailed records about what was considered when appointing a competent person.

A building certifier must be satisfied that an individual is competent to give the type of help having regard to the individual's experience, qualifications and skills and if required by law to hold a licence or registration, that the individual is appropriately registered or licensed.

An individual is appointed as competent to give design-specification help on or from a particular day.

For further information about assessment of someone as a competent person refer to the **Guideline for the assessment of competent persons.**

PRIVACY NOTICE

The Department of Energy and Public Works is collecting personal information as required under the *Building Act 1975*. This information may be stored by the Department, and will be used for administration, compliance, statistical research and evaluation of building laws. Your personal information will be disclosed to other government agencies, local government authorities and third parties for purposes relating to administering and monitoring compliance with the *Building Act 1975*. Personal information will otherwise only be disclosed to third parties with your consent or unless authorised or required by law.

SPA WORLD
SPA STRUCTURAL DRAWINGS
VORTEX SPAS - Aquagym Plunge / Aquagym Pro / Aquagym Pro Plus / Aquagym Extreme

Sheet Index

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	24.11.22

Barrason's Engineers
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T:(03) 5940 2638
W: www.barrasons.com.au

TITLE: TITLE SHEET	PROJECT ADDRESS: SPA STRUCTURAL DRAWINGS VORTEX SPAS	JOB No: 2211225.1	DATE: 24.11.2022	DWG No:	S000	FOR CONSTRUCTION
		CLIENT: TONY JONES	DRAWN: F.N.			
		SCALE: NTS (A3)	CHECKED: B.E.	REVISION:	REV A	

GENERAL:

G1. ALL CONSTRUCTION WORK AND MATERIALS TO CONFORM WITH THE ENGINEER SPECIFICATION, AND CURRENT BUILDING CODE OF AUSTRALIA AND AUSTRALIAN STANDARDS.

G2. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.

G3. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, AND LEVELS SHOWN ARE A.H.D(AUSTRALIAN HT. DATUM)

G4. DRAWINGS ARE NOT TO BE SCALED.RELEVANT DIMENSIONS TO BE CONFIRMED ON SITE BY BUILDER BEFORE COMMENCEMENT OF WORKS.

G5. ANY DISCREPANCIES OR QUERIES SHOULD BE REFERRED TO THE BARRASONS ENGINEERS FOR CLARIFICATIONS PRIOR TO COMMENCEMENT OF WORKS.

G6. THE CONTRACTOR SHALL LIAISE WITH ANY BUILDING/PROPERTY OWNERS AS REQUIRED TO ENSURE MINIMAL DISRUPTIONS TO SERVICES.AND THAT SPECIAL REQUIREMENTS OF THE OWNERS ARE ADHERED TO.

FOOTINGS AND SLAB ON GROUND

F1. ALL WORK AND MATERIALS TO COMPLY WITH AS2870.

F2. ALL FOOTINGS SHALL BE FOUNDED ON FIRMED SOIL. PRIOR TO COMMENCING WORK, THE BUILDER IS TO FAMILARISE THE CONTENT OF THE SOIL REPORT PREPARED BY: ...
REPORT No.: ... DATED: ...
FOOTING DEPTHS SPECIFIED ON THE DRAWINGS ARE MINIMUM DIMENSIONS ONLY. IF NOT SHOWN, REFER TO THE SOIL REPORT FOR THE REQUIRED FOUNDING DEPTH.

F3. THE SITE HAS BEEN CLASSIFIED AS CLASS-' ' IN ACCORDANCE WITH AS 2870.

F4. STRIP / PAD FOOTINGS ARE TO BE FOUNDED ON ORIGINAL UNDISTURBED GROUND WITH AN ALLOWABLE BEARING CAPACITY OF - kPa.

F5. EDGE BEAMS AND LOAD BEARING RIBS SHALL BE FOUNDED ON UNDISTURBED GROUND WITH AN ALLOWABLE BEARING CAPACITY OF - kPa. THE INTERNAL SLAB & NON-LOAD BEARING RIBS SHALL BE FOUNDED ON SOIL WITH MINIMUM BEARING CAPACITY OF - kPa.

F6. ALL ORGANIC MATERIAL SHALL BE REMOVED FROM THE AREA BENEATH THE SLABS ON GROUND. THE GROUND SHALL BE PROOF ROLLED WITH A 3 TONNE ROLLER PRIOR TO PLACING COMPACTED FILL.
ANY SOFT SPOTS SHALL BE DUG OUT AND REPLACED WITH COMPACTED CRUSHED ROCK OR 15MPa BLINDING CONCRETE. IN ACCORDANCE WITH AS2870 AND AS3798.

F7. UNLESS OTHERWISE SPECIFIED IN THE SOIL REPORT, FILLING USED IN THE CONSTRUCTION OF THE SLAB EXCEPT WHERE THE SLAB IS SUSPENDED SHALL CONSIST OF CONTROLLED FILL OR ROLLED FILL AS FOLLOWS:
a. CONTROLLED FILL IS MATERIAL THAT HAS BEEN PLACED AND COMPACTED IN LAYERS BY COMPACTION EQUIPMENT WITHIN DEFINED DENSITY REQUIREMENT. EXCEPT AS PROVIDED BELOW, CONTROLLED FILL SHALL BE PLACED IN ACCORDANCE WITH AS 3798.
SAND FILL UP TO 0.8m DEEP, WELL COMPACTED IN NOT MORE THAN 0.3m THICK LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER, SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT. A SATISFACTORY TEST FOR SAND FILL NOT CONTAINING GRAVEL SIZED MATERIAL IS THE ACHIEVEMENT OF A BLOW COUNT OF 7 OR MORE PER 0.3m USING THE PENETROMETER TEST DESCRIBED IN AS 1289.6.3.3.
NON-SAND FILL UP TO 0.4m DEEP, WELL COMPACTED IN NOT MORE THAN 0.15m LAYERS BY A MECHANICAL ROLLER SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT.
CLAY FILL SHALL BE MOIST DURING COMPACTION.
b. ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 0.6m COMPACTED IN LAYERS NOT MORE THAN 0.3m THICK FOR SAND OR 0.3m COMPACTED IN LAYERS NOT MORE THAN 0.15m THICK FOR OTHER MATERIAL
c. THE EXTENT OF CONTROLLED FILL AND ROLLED FILL REQUIRED SHALL BE DETERMINED ON SITE IN ACCORDANCE WITH SECTION 6 OF AS2870 AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR & BUILDER.

F8. WHERE DEPTH OF CONTROLLED FILL IS THICKER THAN THAT SPECIFIED ABOVE, FILL MATERIAL SHALL BE SPREAD AND COMPACTED IN UNIFORM LAYERS NOT EXCEEDING 0.15m THICK. TOP SURFACE LAYER SHALL BE COMPACTED TO MINIMUM 98% STANDARD DRY DENSITY DETERMINED BY METHODS IN ACCORDANCE WITH AS1289. LOWER LAYERS SHALL BE COMPACTED TO 95% STANDARD DRY DENSITY. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADJUSTED TO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT DURING COMPACTION TO ENSURE THAT THE SPECIFIED COMPACTION IS OBTAINED. COMPACTION TESTS SHALL BE CARRIED OUT AT A RATE OF ONE TEST PER LAYER PER 100 SQUARE METRES OF FILL. TESTS ARE TO BE CARRIED OUT BY INDEPENDENT NATA REGISTERED LABORATORIES. SUBMIT REPORT TO THIS OFFICE FOR APPROVAL.

F9. FOUNDATIONS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR BUILDING INSPECTOR BEFORE LAYING MEMBRANES AND POURING CONCRETE. IF AN UNUSUAL GROUND CONDITION IS ENCOUNTERED DURING THE SITE EXCAVATION, REPORT TO THIS OFFICE FOR RESOLUTION.

F10. NO EXCAVATION IS TO BE TAKEN BELOW THE BASE OF ADJACENT / EXISTING FOOTINGS. IF IT IS UNAVOIDABLE, FOR THE CASE OF NEW FOOTINGS, BLINDING CONCRETE GRADE 15MPa SHALL BE PROVIDED BENEATH THE NEW FOOTING AND FOUNDING BELOW ANGLE OF REPOSE. FOR THE CASE OF EXISTING FOOTINGS, UNDERPINNING IS REQUIRED. REFER TO THIS OFFICE FOR DETAILS.

F11. ALL FOUNDATIONS ARE TO BE FREE OF WATER AND LOOSE MATERIAL

F12. OVER EXCAVATION IS TO BE FILLED TO THE UNDERSIDE OF FOOTINGS WITH 15MPa BLINDING CONCRETE

F13. TERMITE PROTECTION SHALL BE PROVIDED AS REQUIRED BY AUSTRALIAN STANDARD AND THE LOCAL STATUTORY AUTHORITY.

F14. A 0.2mm POLYTHENE MEMBRANE SHALL BE CONTINUOUS UNDER SLAB AND RIBS LAPPED 200mm MINIMUM WHERE REQUIRED AND TAPED AT ALL SERVICE PENETRATIONS, LAPS AND PUNCTURES. THE MEMBRANE IS TO EXTEND UNDER AND TO THE SIDES OF SLABS, BEAMS AND THICKENINGS.

F15. EXCAVATIONS NEAR THE BUILDING EDGE SHALL BE BACKFILLED IN SUCH A MANNER TO PREVENT READY ACCESS OF WATER TO THE FOUNDATIONS

F16. SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS FOLLOWS :

Y	GRADE 400MPa DEFORMED REINFORCING BARS TO AS 1302.
N	GRADE 500MPa DEFORMED REINFORCING BARS, DUCTILITY CLASS N TO AS 4671
R	GRADE 250MPa PLAIN REINFORCING BARS TO AS 1302
TM	HARD-DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671
RL	RECTANGULAR RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671
SL	SQUARE RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671

F17. FABRIC SHALL BE PLACED NEAR THE TOP OF THE SLAB AND SHALL HAVE A NOMINAL COVER OF 25mm U.N.O.

F18. REINFORCEMENT FABRIC SHALL BE LAPPED SO THAT EACH PAIR OF TRANSVERSE WIRES AT THE EDGE OF ONE SHEET OVERLAPS EACH CORRESPONDING PAIR OF TRANSVERSE WIRES OF THE SHEET BEING LAPPED. REINFORCEMENT SHALL BE SUPPORTED IN POSITION PRIOR TO CONCRETING COMMENCING ON DENSE PRECAST CONCRETE SPACER BLOCKS OR BAR CHAIRS ON GALVANIZED STEEL DISHES (EITHER OF WHICH MUST NOT DAMAGE THE MEMBRANE) AT 900mm MAXIMUM CENTRES EACH WAY TRAMPING IN FABRIC IS NOT PERMITTED

F19 BEAM AND STRIP FOOTING REINFORCEMENT SHALL HAVE A NOMINAL COVER OF 50mm.

F20. TRENCH MESH SHALL BE LAID CONTINUOUSLY AND SHALL BE SPLICED WHERE NECESSARY WITH A MINIMUM LAP OF 500mm

F21. TRENCH MESH SHALL BE OVERLAPPED BY THE WIDTH OF FABRIC AT CORNERS AND INTERSECTIONS. THE ENDS OF TRENCH MESH SHALL TERMINATE WITH A CROSSBAR.

F22. PROVIDE 2N12 x 1200 BARS OR EQUIVALENT TRENCH MESH x 2000 LONG DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLAB AND TIED TO UNDERSIDE OF TOP FABRIC.

F23. CONCRETE STRENGTH IS TO BE f'c = 25MPA, WITH 65 MAX. SLUMP, COMPACTED USING MECHANICAL VIBRATION. SLAB & RIBS ARE TO BE CAST IN ONE CONTINUOUS POUR AND THE SLAB IS TO BE STEEL-FLOAT FINISHED

F24. ALL CONCRETE IS TO BE CONTINUOUSLY WET-CURED FOR 7 DAYS.

F25. THE GROUND SURROUNDING SLABS SHALL HAVE THE SURFACE AT LEAST 150mm LOWER THAN THE SLAB AND BE SLOPED AWAY FROM THE SLAB EDGE SO THAT WATER WILL DISCHARGE TO SUITABLE DRAINAGE POINTS AND NOT FLOOD THE SLAB SURFACE.

F26. HOT WATER HEATING PIPES MAY BE EMBEDDED IN THE SLAB PROVIDED THAT THE SLAB THICKNESS IS INCREASED BY 25mm AND LAID ON ADDITIONAL SL52 MESH.

CONCRETE:

C1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.

C2 UNLESS OTHERWISE SHOWN THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS FOLLOWS:

ELEMENT	CONC. STRENGTH (f'c) MPa	SLUMP mm
FOOTINGS	25	75
SLAB-ON-GROUND	32	65
COLUMNS	32	80
WALLS	40	85
SUSPENDED SLABS & BEAMS	32	80
MASS CONCRETE	15	-

C3 CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER PLACEMENT.

C4 CONCRETE SHALL BE COMPACTED USING MECHANICAL VIBRATION.

C5 VIBRATION OF FORMS IS NOT ACCEPTABLE AND CONCRETE SHALL NOT BE SPREAD BY VIBRATING.

C6 CONCRETE SECTIONS SHOWN ARE MINIMUM SIZES AND DO NOT INCLUDE FINISHES. SIZES SHALL NOT BE REDUCED IN ANY WAY OR HOLES FORMED OR MADE IN

C7 DEPTH OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS

C8 SLABS AND BEAMS ARE TO BE POURED CONCURRENTLY U.N.O. AND FINISHED WITH A STEEL FLOAT.

C9 POOL PAVERS CONCRETE AND MASONRY PAVERS SURROUNDING POOLS TO BE CONSTRUCTED TO REQUIREMENTS OF AS3727.1-2016, PAVEMENTS, PART 1: RESIDENTIAL.

C10 RECOMMENDED CONCRETE SLAB TO BE 150MM THICK, CONCRETE GRADE N32, SL82 REINFORCEMENT WITH 30MM COVER TO THE TOP SURFACE AND 40MM SIDE COVER.MINIMUM SOIL ALLOWABLE BEARING CAPACITY TO BE 100KPA.

C11 MINIMUM COVER TO ALL REINFORCEMENT INCLUDING FITMENTS SHALL BE AS FOLLOWS, U.N.O:

ELEMENT	FORMED AND NOT EXPOSED TO WEATHER	FORMED ON GROUND & EXPOSED TO WEATHER	NOT FORMED. CAST AGAINST GROUND
INSITU COLUMN & PEDESTALS	40	50	75
INSITU BEAMS	40	50	65
FOOTINGS	-	50	75
PIERS	-	50	75
SLABS ON GROUND	20	30	65
SUSPENDED SLABS	20	30	65
INSITU WALLS	25	30	65
PRECAST WALLS	25	30	65
UNDERPINNING	-	50	75

C12 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT IN TRUE PROJECTION.

C13 SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS FOLLOWS:

Y	GRADE 400MPa DEFORMED REINFORCING BARS TO AS1302
N	GRADE 500MPa DEFORMED REINFORCING BARS, DUCTILITY CLASS N TO AS 4671
R	GRADE 250MPa PLAIN REINFORCING BARS TO AS1302
W	HARD-DRAWN STEEL REINFORCING WIRE, GRADE 500 DUCTILITY CLASS L TO AS 4671
TM	HARD-DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671
RL	RECTANGULAR RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671
SL	SQUARE RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671

C14 ALL REINFORCEMENT AND INSERTS SHALL BE SUPPORTED AND HELD IN THE DESIGN LOCATION BY APPROVED BAR CHAIRS, SPACERS OR TIES. BAR CHAIRS SHALL BE PLACED AT MINIMUM 1000 CENTRES IN TWO DIRECTIONS U.N.O.

C15 WELDING AND THREADING OF REINFORCEMENT IS NOT PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

C16 REINFORCEMENT SHALL BE EVENLY DISTRIBUTED OVER THE WIDTHS SHOWN U.N.O.

C17 PROVIDE 2-N12 x 1200 BARS DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLABS, TIED UNDER THE TOP FABRIC. U.N.O.

C18 AT SLAB EDGES INCLUDING CONSTRUCTION AND OTHER JOINTS, AT LEAST ONE REINFORCING BAR OR FABRIC WIRE SHALL BE LOCATED PARALLEL TO AND WITHIN 75mm OF THE SLAB EDGE.

C19 CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE APPROVED OR PERMITTED BY THE ENGINEER.

C20 SAWN JOINTS SHALL BE MADE AT A TIME APPROPRIATE TO THE CONCRETE MIX AND CLIMATIC CONDITIONS, GENERALLY BETWEEN 10 AND 20 HOURS OF PLACING THE CONCRETE.

C21 STRIPPING OF FORMS AND REMOVAL OF FORMWORK SHALL TAKE PLACE IN ACCORDANCE WITH A PROCEDURE AGREED TO BY THE ENGINEER.

C22 CONCRETE MUST BE SEPARATED FROM SUPPORTING MASONRY WORK BY TWO LAYERS OF A SUITABLE DE-BONDING MEMBRANE.

C23 SUSPENDED SLABS SHALL BE GIVEN AN UPWARD MID-SPAN CAMBER OF 3mm PER 1000mm U.N.O. BEAMS SHALL BE AS SHOWN ON DRAWINGS.

C24 SPLICES IN REINFORCEMENT SHALL BE MADE IN THE POSITIONS SHOWN ON THE DRAWINGS OR AS OTHERWISE APPROVED BY THE ENGINEER.

C25 HOLDING-DOWN BOLTS SHALL BE SUPPLIED TO THE CONCRETOR FOR CASTING INTO THE CONCRETE AND SHALL BE INSTALLED IN ACCORDANCE WITH THE STEEL HOLDING-DOWN BOLT PLAN.

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	24.11.22

Barrason's Engineers
E: admin@barrasons.com.au
T:(03) 5940 2638
W: www.barrasons.com.au

TITLE: GENERAL NOTES-1

PROJECT ADDRESS: SPA STRUCTURAL DRAWINGS
VORTEX SPAS

JOB No: 2211225.1
CLIENT: TONY JONES
SCALE: NTS (A3)
DATE: 24.11.2022
DRAWN: F.N.
CHECKED: B.E.
DWG No: S001
REVISION: REV A

FOR CONSTRUCTION

STRUCTURAL STEELWORK:

S1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.

S2 ALL STEEL SHALL BE NEW AND FREE FROM WELDS AND BLEMISHES UNLESS APPROVED BY THE ENGINEER.

S3 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AS 4100 AND SAA/SNZ HB62.

S4 HOT-ROLLED AND WELDED PRODUCTS SHALL BE BHP-300PLUS AND PLATE SHALL BE GRADE 250 U.N.O.

S5 ALL WELDING SHALL BE IN ACCORDANCE WITH AS 1554.

S6 WELD TYPES ARE DESIGNATED AS FOLLOWS
CFW - CONTINUOUS FILLET WELD
FPBW - FULL PENETRATION BUTT WELD
PPBW - PARTIAL PENETRATION BUTT WELD

S7 ALL WELDS SHALL BE 6mm CONTINUOUS FILLET, CATEGORY GP, USING E41XX/W40X CONSUMABLES U.N.O.

S8 WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554 INSPECTED & CERTIFIED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH AS2214

S9 ALL HIGH-STRENGTH STRUCTURAL BOLTS SHALL BE M20 GRADE 8.8/S U.N.O. IN ACCORDANCE WITH AS 1252

S10 HOLDING-DOWN BOLTS SHALL BE M20 GRADE 4.6/S, GALVANISED U.N.O

S11 BOLTS MUST BE OF SUFFICIENT LENGTH TO HAVE AT LEAST ONE FULL THREAD EXPOSED AFTER TIGHTENING

S12 BOLTS IN OVERSIZE OR SLOTTED HOLES ARE TO HAVE SUITABLE LARGER SIZE WASHERS

S13 CONNECTIONS NOT SPECIFICALLY DETAILED SHALL BE IN ACCORDANCE WITH THE APPROPRIATE CONNECTION AS DETAILED IN THE AISC STANDARDISED STRUCTURAL CONNECTIONS MANUAL.

S14 UNLESS NOTED OTHERWISE CONNECTIONS BETWEEN 2 STRUCTURAL STEEL MEMBERS ARE TO HAVE MINIMUM 2M20 8.8/S BOLTS IN 22Ømm HOLES

S15 BOLT TYPES AND BOLTING PROCEDURE ARE DESIGNATED AS FOLLOWS
4.6/S - COMMERCIAL BOLTS TO AS 1111, SNUG TIGHTENED
8.8/S - HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND HARDENED WASHERS TO AS 1252, SNUG TIGHTENED
8.8/TB - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS 1511 IN A BEARING TYPE JOINT
8.8/TF - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS 1511 IN A FRICTION TYPE JOINT

S16 FULLY TENSIONED BOLTS ARE TO BE INITIALLY SNUG TIGHTENED, CONNECTING PLATES ADJUSTED TO FULL CONTACT, THEN TIGHTEN BOLTS TO AN ADDITIONAL HALF TURN IN ACCORDANCE WITH AS 4100
ALTERNATIVELY PROVIDE LOAD INDICATING WASHERS AND INSTALL CONNECTIONS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND AS 4100

S17 ALL CLEAT PLATES AND STIFFENERS SHALL BE 10mm THICK U.N.O.

S18 THE ENDS OF ALL TUBULAR MEMBERS SHALL BE SEALED WITH A 3mm PLATE U.N.O.

S19 TUBULAR MEMBERS TO BE GALVANISED SHALL BE ADEQUATELY VENTED.

S20 PURLINS AND GIRTS INCLUDING LATERAL AND BUCKLING RESTRAINING MEMBERS SUCH AS BRIDGING, STRUTS AND TIE RODS SHALL BE IN ACCORDANCE WITH AS/NZS 4600, GALVANISED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

S21 BEFORE COMMENCING FABRICATION 3 COPIES OF THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THIS REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS.

S22 CAMBER SHALL BE AS NOTED ON THE DRAWINGS.

S23 STRUCTURAL STEEL TO BE CONCRETE ENCASED SHALL BE WRAPPED WITH F41 MESH. THE GAP BETWEEN THE STRUCTURAL STEEL AND THE MESH AND AND THE THE EXTERNAL COVER TO THE MESH SHALL BE 25mm AND 50mm RESPECTIVELY.

S24 ALL BOLTS AND STRUCTURAL STEEL EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANISED U.N.O. PAINT SYSTEMS TO GALVANISED STEEL TO BE AS SPECIFIED BY THE ARCHITECT

S25 ALL STEEL LINTELS SUPPORTING MASONRY EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANISED.

S26 PROVIDE ALL NECESSARY CLEATS AND HOLES REQUIRED TO FIX TIMBER AND OTHER MATERIALS AND FINISHES TO THE STEELWORK.

S27 LINTELS SHALL NOT BE PROPPED DURING LOAD APPLICATION U.N.O.

S28 THE CONTRACTOR SHALL PROVIDE AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED, SUCH TEMPORARY BRACING AS IS NECESSARY TO ADEQUATELY STABILIZE THE STRUCTURE DURING ERECTION.

S29 PROVIDE 150mm MINIMUM END BEARING WITH 20mm NOM. LEVELLING GROUT U.N.O. TO STEELWORK SEATED ON MASONRY. CHARACTERISTIC COMPRESSIVE STRENGTH OF GROUT IS 30MPa

S30 PROTECTIVE COATINGS TO INTERNAL STEELWORK (U.N.O.):

PREPARATION:	CLASS 2A ABRASIVE BLAST
COATING:	
FIRST COAT	INORGANIC ZINC SILICATE 75 DRY FILM THICKNESS
SECOND COAT	ACRYLIC PAINT 50 DRY FILM THICKNESS
THIRD COAT	ACRYLIC PAINT 50 DRY FILM THICKNESS

CONCRETE ENCASED AND FIRE-SPRAYED MEMBERS, AND FRICTION-GRIP BOLTED CONNECTIONS MUST NOT BE PAINTED. U.N.O.

S31 COATINGS DAMAGED DURING TRANSPORT AND ERECTION OR BY WELDING SHALL BE MADE GOOD AFTER BEING WIRE-BRUSHED CLEAN, AND RECOATED AS ABOVE.

S32 REFER TO ARCHITECTURAL DRAWINGS FOR ALL ADDITIONAL PLATES, ANGLES ETC. AS REQUIRED FOR FIXINGS TO INTERNAL PARTITIONS, BLOCKING, WINDOW FRAMES, ARCHITECTURAL FEATURES ETC

S33 PROVIDE ALL NECESSARY TRIMMING ANGLES AND FIXINGS TO SUPPORT CLADDING AND FLASHINGS AT ROOF OR WALL INTERSECTIONS

S34 PROVIDE ALL NECESSARY SUBFRAMES AND TRIMMERS FOR MECHANICAL AND ELECTRICAL EQUIPMENT AND ARCHITECTURAL FEATURES

S35 SUPPORT ROOF BRACING FROM EVERY SECOND PURLIN WITH HOOK BOLTS

SPA MANUFACTURE :

CONSTRUCTION SEQUENCE :

STEP 1. VACUUM FORM USING 4.75, ARISTECH ACRYLIC SHEET

STEP 2. FIRST COATING 1.5MM - 2MM USING APPROX. 40:60 RATIO (GLASS TO .... RESIN)
FIBERGLASS PRAY UP ROVING : 110P VINYL ESTER RESIN
CATALYST M50 (1.8% - 2%)

STEP 3. OVER CURE AT 35-40 DEGREES CELSIUS

STEP 4. SECOND COATING 4MM - 8MM USING APPROX. 40:60 RATIO (GLASS TO RESIN)
FIBERGLASS PRAY UP ROVING : 290P POLYESTER RESIN
CATALYST 388 (1.8% - 2%)
CALCIUM CARBONATE FILLER ON SECOND LAYER

NOTES :

SWIMMING POOL AND SPA SAFETY TO FOLLOW THE GUIDELINES OF PN-05-2018 PUBLISHED BY VBA.

BARRIERS AND LOCATION OF BARRIERS TO BE DESIGNED TO REQUIREMENTS OF AS 1926.1-2012 AND AS 1926.2-2007, SWIMMING POOL SAFETY - SAFETY BARRIERS FOR SWIMMING POOLS.

DESIGN AND INSTALL POOLS AND SPAS MANUFACTURED FROM FIBRE-REINFORCED PLASTIC MATERIALS, WITH VOLUMES EXCEEDING 7500 AND DEPTHS GREATER THAN 750MM, TO REQUIREMENTS OF AS/NZS 1838:1994, SWIMMING POOLS - PREMOULDED FIBRE-REINFORCED DESIGN AND FABRICATION.

REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	24.11.22

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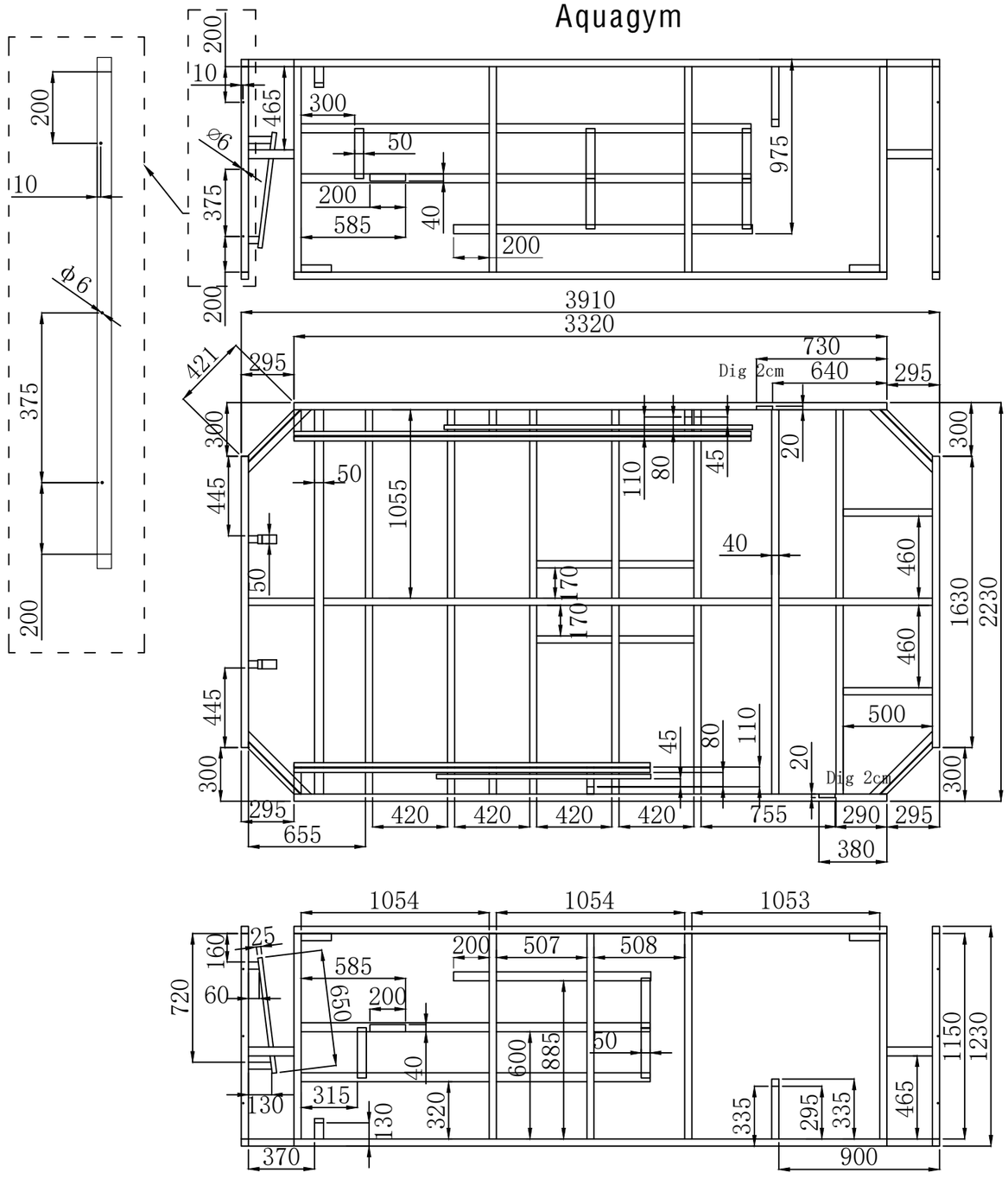
TITLE: GENERAL NOTES-2

PROJECT ADDRESS: SPA STRUCTURAL DRAWINGS VORTEX SPAS

JOB No: 2211225.1
CLIENT: TONY JONES
SCALE: NTS (A3)
DATE: 24.11.2022
DRAWN: F.N.
CHECKED: B.E.
DWG No: S002
REVISION: REV A

FOR CONSTRUCTION

Aquagym



REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	24.11.22

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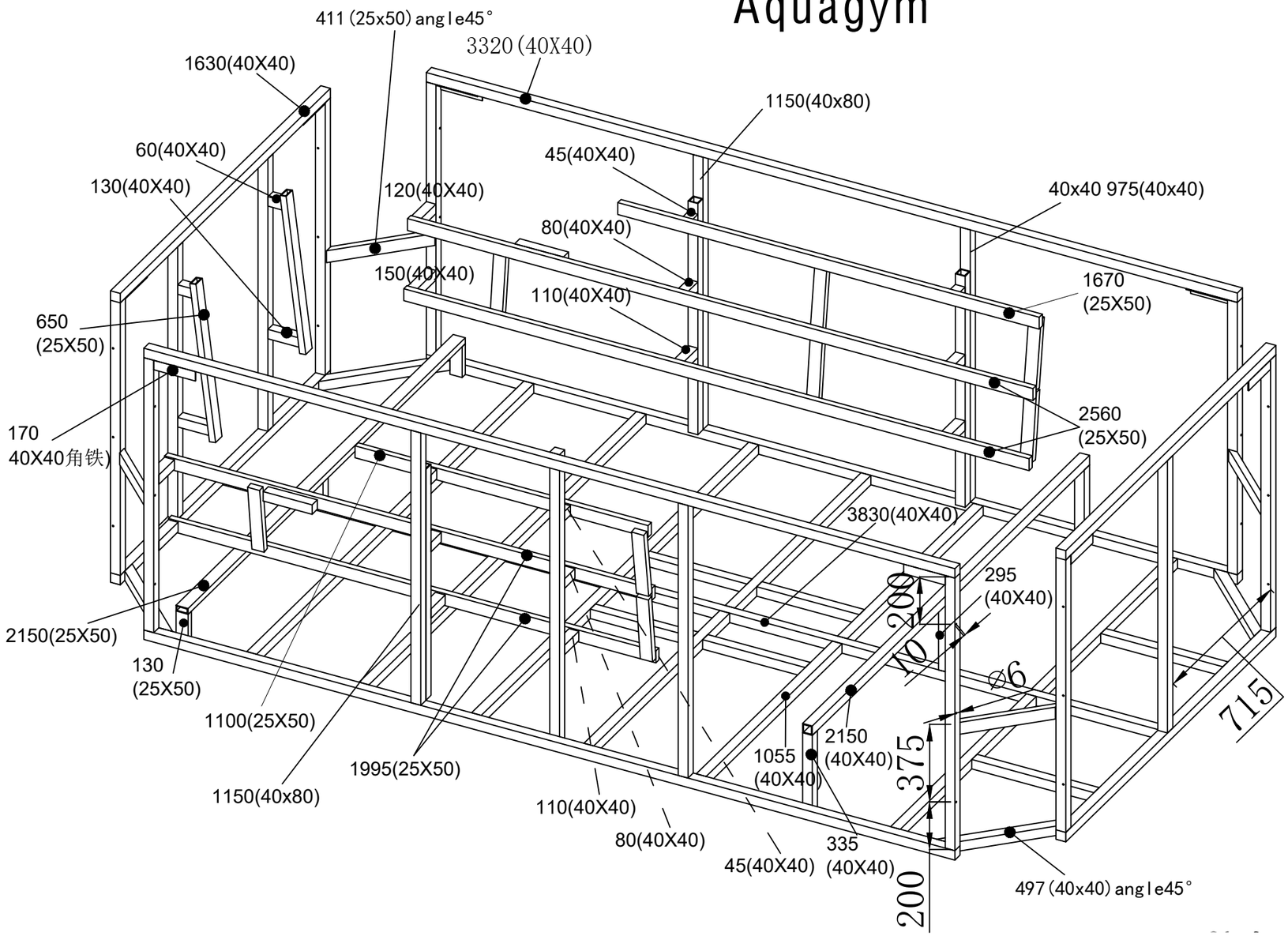
TITLE: SPA FRAMING PLAN	PROJECT ADDRESS: SPA STRUCTURAL DRAWINGS VORTEX SPAS	JOB No: 2211225.1	DATE: 24.11.2022	DWG No:	S101	FOR CONSTRUCTION
		CLIENT: TONY JONES	DRAWN: F.N.			
		SCALE: 1:100 (A3)	CHECKED: B.E.	REVISION:	REV A	

Aquagym



REV	STATUS	DRAWN	CHECKED	DATE
A	FOR CONSTRUCTION	F.N.	B.E.	24.11.22

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TITLE: SPA PERSPECTIVE	PROJECT ADDRESS: SPA STRUCTURAL DRAWINGS VORTEX SPAS	JOB No: 2211225.1	DATE: 24.11.2022	DWG No:	S102	**FOR CONSTRUCTION**
		CLIENT: TONY JONES	DRAWN: F.N.			
		SCALE: 1:100 (A3)	CHECKED: B.E.	REVISION:	REV A	

BARRASON'S ENGINEERS
Structural and Civil Consultants

Building Act 1993
Section 238(1)(a)
Building Regulations 2018

REGULATION 126: CERTIFICATE OF COMPLIANCE—Proposed Building Works

This certificate is issued to:

T.B.A.

This certificate is issued in relation to the proposed building works at

Aquagym Max 1300 Spa Series: Aquagym Max 1300 Plunge, Aquagym Max 1300 Pro, Aquagym Max 1300 Pro +, Aquagym Max 1300 Extreme

Nature of proposed work:

Construction of a spa frame

Building classification as per NCC 2019:

Part of building: SPA Framing BCA Classification:10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to this structural matter

Documents setting out the design that is certified by this certificate:
Drawings: Ref: 2207185 Sheet: S000-002, S101-103 Date:21/07/2022
Prepared by:B.E Barrason's Engineers

The design certified by this certificate complies with the following provisions of the Australian Building Act 1993, Building Regulations 2018 or National Construction Code:
Part 3.2, 3.4 & 3.11 of the NCC 2019 including relevant Australian Standards:
AS1170.0, AS1170.1, AS1170.2, AS1684.2 AS1684.4, AS1720.1, AS2870, AS3600, AS3700, AS3850, AS4100, AS4055, AS4671, AS4773.1

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 required to do so.

Engineer:

Name: Andrew Barraclough
email: admin@barrasons.com.au
Building Practitioner number:
Company VBA registration:

Registrations: FIEAUST, CPEng, NER, RBP
Qualifications: BEng MEng PhD
EC-46301 RPEQ 22822
CEC-53929 PE0000600

Signed:
Andrew Barraclough

Date of issue of certificate: 21/07/2022

SPAWORLD
CONSTRUCTION DRAWINGS

Sheet Index

Layout ID	Layout Name
S000	Title Sheet
S001	General Notes P1
S002	General Notes P2
S101	Framing Plan
S102	Framing Elevations
S103	Perspective

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SPA - STRUCTURAL DRAWINGS

FOR CONSTRUCTION

COVER SHEET

CLIENT: --

JOB No: 2207185 DRAWING No:

S000

SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	21/07/22

GENERAL:

1. ALL CONSTRUCTION WORKS AND MATERIALS TO CONFORM WITH THE ENGINEER SPECIFICATION AND AUSTRALIAN STANDARDS AND THE CURRENT BUILDING CODE OF AUSTRALIA.
2. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, AND LEVELS SHOWN ARE A.H.D. (AUSTRALIAN HT. DATUM)
3. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS
4. DRAWING ARE NOT TO BE SCALED.RELEVANT DIMENSIONS TO BE CONFIRMED ON SITE BY BUILDER BEFORE COMMENCEMENT OF WORKS
5. ANY DISCREPANCIES OR QUERIES SHOULD BE REFERRED TO THE BARRASONSENGINEERS FOR CLARIFICATIONS PRIOR TO COMMENCEMENT OF WORKS.
6. THE CONTRACTOR SHALL LIAISE WITH WITH ANY BUILDING/ PROPERTY OWNERS AS REQUIRED TO ENSURE MINIMAL DISRUPTIONS TO SERVICES. AND THAT SPECISL REQUIREMENTS OF THE OWNERS ARE ADHERED TO.

FOOTINGS AND SLAB ON GROUND

F1. ALL WORK AND MATERIALS TO COMPLY WITH AS2870.

F2. ALL FOOTINGS SHALL BE FOUNDED ON FIRMED SOIL. PRIOR TO COMENCING WORK, THE BUILDER IS TO FAMILARISE THE CONTENT OF THE SOIL REPORT PREPARED BY: --
REPORT No.: -- DATED: --
FOOTING DEPTHS SPECIFIED ON THE DRAWINGS ARE MINIMUM DIMENSIONS ONLY. IF NOT SHOWN, REFER TO THE SOIL REPORT FOR THE REQUIRED FOUNDING DEPTH.

F3. THE SITE HAS BEEN CLASSIFIED AS CLASS '-- ' IN ACCORDANCE WITH AS 2870.

F4. STRIP / PAD FOOTINGS ARE TO BE FOUNDED ON ORIGINAL UNDISTURBED GROUND WITH AN ALLOWABLE BEARING CAPACITY OF -- kPa.

F5. EDGE BEAMS AND LOAD BEARING RIBS SHALL BE FOUNDED ON UNDISTURBED GROUND WITH AN ALLOWABLE BEARING CAPACITY OF -- kPa. THE INTERNAL SLAB & NON-LOAD BEARING RIBS SHALL BE FOUNDED ON SOIL WITH MINIMUM BEARING CAPACITY OF -- kPa.

F6. ALL ORGANIC MATERIAL SHALL BE REMOVED FROM THE AREA BENEATH THE SLABS ON GROUND. THE GROUND SHALL BE PROOF ROLLED WITH A 3 TONNE ROLLER PRIOR TO PLACING COMPACTED FILL.
ANY SOFT SPOTS SHALL BE DUG OUT AND REPLACED WITH COMPACTED CRUSHED ROCK OR 15MPa BLINDING CONCRETE. IN ACCORDANCE WITH AS2870 AND AS3798.

F7. UNLESS OTHERWISE SPECIFIED IN THE SOIL REPORT, FILLING USED IN THE CONSTRUCTION OF THE SLAB EXCEPT WHERE THE SLAB IS SUSPENDED SHALL CONSIST OF CONTROLLED FILL OR ROLLED FILL AS FOLLOWS:
a. CONTROLLED FILL IS MATERIAL THAT HAS BEEN PLACED AND COMPACTED IN LAYERS BY COMPACTION EQUIPMENT WITHIN DEFINED DENSITY REQUIREMENT. EXCEPT AS PROVIDED BELOW, CONTROLLED FILL SHALL BE PLACED IN ACCORDANCE WITH AS 3798.
SAND FILL UP TO 0.8m DEEP, WELL COMPACTED IN NOT MORE THAN 0.3m THICK LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER, SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT. A SATISFACTORY TEST FOR SAND FILL NOT CONTAINING GRAVEL SIZED MATERIAL IS THE ACHIEVEMENT OF A BLOW COUNT OF 7 OR MORE PER 0.3m USING THE PENETROMETER TEST DESCRIBED IN AS 1289.6.3.3.
NON-SAND FILL UP TO 0.4m DEEP, WELL COMPACTED IN NOT MORE THAN 0.15m LAYERS BY A MECHANICAL ROLLER SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT.
CLAY FILL SHALL BE MOIST DURING COMPACTION.
b. ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR.
ROLLED FILL SHALL NOT EXCEED 0.6m COMPACTED IN LAYERS NOT MORE THAN 0.3m THICK FOR SAND OR 0.3m COMPACTED IN LAYERS NOT MORE THAN 0.15m THICK FOR OTHER MATERIAL
c. THE EXTENT OF CONTROLLED FILL AND ROLLED FILL REQUIRED SHALL BE DETERMINED ON SITE IN ACCORDANCE WITH SECTION 6 OF AS2870 AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR & BUILDER.

F8. WHERE DEPTH OF CONTROLLED FILL IS THICKER THAN THAT SPECIFIED ABOVE, FILL MATERIAL SHALL BE SPREAD AND COMPACTED IN UNIFORM LAYERS NOT EXCEEDING 0.15m THICK. TOP SURFACE LAYER SHALL BE COMPACTED TO MINIMUM 98% STANDARD DRY DENSITY DETERMINED BY METHODS IN ACCORDANCE WITH AS1289. LOWER LAYERS SHALL BE COMPACTED TO 95% STANDARD DRY DENSITY. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADJUSTED TO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT DURING COMPACTION TO ENSURE THAT THE SPECIFIED COMPACTION IS OBTAINED. COMPACTION TESTS SHALL BE CARRIED OUT AT A RATE OF ONE TEST PER LAYER PER 100 SQUARE METRES OF FILL. TESTS ARE TO BE CARRIED OUT BY INDEPENDENT NATA REGISTERED LABORATORIES. SUBMIT REPORT TO THIS OFFICE FOR APPROVAL.

F9. FOUNDATIONS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR BUILDING INSPECTOR BEFORE LAYING MEMBRANES AND POURING CONCRETE. IF AN UNUSUAL GROUND CONDITION IS ENCOUNTERED DURING THE SITE EXCAVATION, REPORT TO THIS OFFICE FOR RESOLUTION.

F10. NO EXCAVATION IS TO BE TAKEN BELOW THE BASE OF ADJACENT / EXISTING FOOTINGS. IF IT IS UNAVOIDABLE, FOR THE CASE OF NEW FOOTINGS, BLINDING CONCRETE GRADE 15MPa SHALL BE PROVIDED BENEATH THE NEW FOOTING AND FOUNDING BELOW ANGLE OF REPOSE. FOR THE CASE OF EXISTING FOOTINGS, UNDERPINNING IS REQUIRED. REFER TO THIS OFFICE FOR DETAILS.

F11. ALL FOUNDATIONS ARE TO BE FREE OF WATER AND LOOSE MATERIAL

F12. OVER EXCAVATION IS TO BE FILLED TO THE UNDERSIDE OF FOOTINGS WITH 15MPa BLINDING CONCRETE

F13. TERMITE PROTECTION SHALL BE PROVIDED AS REQUIRED BY AUSTRALIAN STANDARD AND THE LOCAL STATUTORY AUTHORITY.

F14. A 0.2mm POLYTHENE MEMBRANE SHALL BE CONTINUOUS UNDER SLAB AND RIBS LAPPED 200mm MINIMUM WHERE REQUIRED AND TAPED AT ALL SERVICE PENETRATIONS, LAPS AND PUNCTURES. THE MEMBRANE IS TO EXTEND UNDER AND TO THE SIDES OF SLABS, BEAMS AND THICKENINGS.

F15. EXCAVATIONS NEAR THE BUILDING EDGE SHALL BE BACKFILLED IN SUCH A MANNER TO PREVENT READY ACCESS OF WATER TO THE FOUNDATIONS

F16. SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS FOLLOWS :
- Y GRADE 400MPa DEFORMED REINFORCING BARS TO AS 1302.
- N GRADE 500MPa DEFORMED REINFORCING BARS, DUCTILITY CLASS N TO AS 4671
- R GRADE 250MPa PLAIN REINFORCING BARS TO AS 1302
- TM HARD-DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671
- RL RECTANGULAR RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671
- SL SQUARE RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671

F17. FABRIC SHALL BE PLACED NEAR THE TOP OF THE SLAB AND SHALL HAVE A NOMINAL COVER OF 25mm U.N.O.

F18. REINFORCEMENT FABRIC SHALL BE LAPPED SO THAT EACH PAIR OF TRANSVERSE WIRES AT THE EDGE OF ONE SHEET OVERLAPS EACH CORRESPONDING PAIR OF TRANSVERSE WIRES OF THE SHEET BEING LAPPED. REINFORCEMENT SHALL BE SUPPORTED IN POSITION PRIOR TO CONCRETING COMMENCING ON DENSE PRECAST CONCRETE SPACER BLOCKS OR BAR CHAIRS ON GALVANIZED STEEL DISHES (EITHER OF WHICH MUST NOT DAMAGE THE MEMBRANE) AT 900mm MAXIMUM CENTRES EACH WAY TRAMPING IN FABRIC IS NOT PERMITTED

F19 BEAM AND STRIP FOOTING REINFORCEMENT SHALL HAVE A NOMINAL COVER OF 50mm.

F20. TRENCH MESH SHALL BE LAID CONTINUOUSLY AND SHALL BE SPLICED WHERE NECESSARY WITH A MINIMUM LAP OF 500mm

F21. TRENCH MESH SHALL BE OVERLAPPED BY THE WIDTH OF FABRIC AT CORNERS AND INTERSECTIONS. THE ENDS OF TRENCH MESH SHALL TERMINATE WITH A CROSSBAR.

F22. PROVIDE 2N12 x 1200 BARS OR EQUIVALENT TRENCH MESH x 2000 LONG DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLAB AND TIED TO UNDERSIDE OF TOP FABRIC.

F23. CONCRETE STRENGTH IS TO BE f'c = 25MPA, WITH 65 MAX. SLUMP, COMPACTED USING MECHANICAL VIBRATION. SLAB & RIBS ARE TO BE CAST IN ONE CONTINUOUS POUR AND THE SLAB IS TO BE STEEL-FLOAT FINISHED

F24. ALL CONCRETE IS TO BE CONTINUOUSLY WET-CURED FOR 7 DAYS.

F25. THE GROUND SURROUNDING SLABS SHALL HAVE THE SURFACE AT LEAST 150mm LOWER THAN THE SLAB AND BE SLOPED AWAY FROM THE SLAB EDGE SO THAT WATER WILL DISCHARGE TO SUITABLE DRAINAGE POINTS AND NOT FLOOD THE SLAB SURFACE.

F26. HOT WATER HEATING PIPES MAY BE EMBEDDED IN THE SLAB PROVIDED THAT THE SLAB THICKNESS IS INCREASED BY 25mm AND LAID ON ADDITIONAL SL52 MESH.

CONCRETE:

C1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.

C2 UNLESS OTHERWISE SHOWN THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS FOLLOWS:

ELEMENT	CONC. STRENGTH (f'c) MPa	SLUMP mm
FOOTINGS	25	75
SLAB-ON-GROUND	25	65
COLUMNS	32	80
WALLS	40	85
SUSPENDED SLABS & BEAMS	32	80
MASS CONCRETE	15	-

C3 CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER PLACEMENT.

C4 CONCRETE SHALL BE COMPACTED USING MECHANICAL VIBRATION.

C5 VIBRATION OF FORMS IS NOT ACCEPTABLE AND CONCRETE SHALL NOT BE SPREAD BY VIBRATING.

C6 CONCRETE SECTIONS SHOWN ARE MINIMUM SIZES AND DO NOT INCLUDE FINISHES. SIZES SHALL NOT BE REDUCED IN ANY WAY OR HOLES FORMED OR MADE IN

C7 DEPTH OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS

C8 SLABS AND BEAMS ARE TO BE POURED CONCURRENTLY U.N.O. AND FINISHED WITH A STEEL FLOAT.

C9 POOL PAVERS CONCRETE AND MASONRY PAVERS SURROUNDING POOLS TO BE CONSTRUCTED TO REQUIREMENTS OF AS3727.1-2016, PAVEMENTS, PART 1: RESIDENTIAL.

C10 RECOMMENDED CONCRETE SLAB TO BE 150MM THICK, CONCRETE GRADE N32, SL82 REINFORCEMENT WITH 30MM COVER TO THE TOP SURFACE AND 40M SIDE COVER. MINIMUM SOIL ALLOWABLE BEARING CAPACITY TO BE 100KPA.

C11 MINIMUM COVER TO ALL REINFORCEMENT INCLUDING FITMENTS SHALL BE AS FOLLOWS, U.N.O:

ELEMENT	FORMED AND NOT EXPOSED TO WEATHER	FORMED ON GROUND & EXPOSED TO WEATHER	NOT FORMED. CAST AGAINST GROUND
INSITU COLUMN & PEDESTALS	40	50	75
INSITU BEAMS	40	50	65
FOOTINGS	-	50	75
PIERS	-	50	75
SLABS ON GROUND	20	30	65
SUSPENDED SLABS	20	30	65
INSITU WALLS	25	30	65
PRECAST WALLS	25	30	65
UNDERPINNING	-	50	75

C12 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT IN TRUE PROJECTION.
SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS FOLLOWS:

C13
- Y GRADE 400MPa DEFORMED REINFORCING BARS TO AS1302
- N GRADE 500MPa DEFORMED REINFORCING BARS, DUCTILITY CLASS N TO AS 4671
- R GRADE 250MPa PLAIN REINFORCING BARS TO AS1302
- W HARD-DRAWN STEEL REINFORCING WIRE, GRADE 500 DUCTILITY CLASS L TO AS 4671
- TM HARD-DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671
- RL RECTANGULAR RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671
- SL SQUARE RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671

C14 ALL REINFORCEMENT AND INSERTS SHALL BE SUPPORTED AND HELD IN THE DESIGN LOCATION BY APPROVED BAR CHAIRS, SPACERS OR TIES. BAR CHAIRS SHALL BE PLACED AT MINIMUM 1000 CENTRES IN TWO DIRECTIONS U.N.O.

C15 WELDING AND THREADING OF REINFORCEMENT IS NOT PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

C16 REINFORCEMENT SHALL BE EVENLY DISTRIBUTED OVER THE WIDTHS SHOWN U.N.O.

C17 PROVIDE 2-N12 x 1200 BARS DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLABS, TIED UNDER THE TOP FABRIC. U.N.O.

C18 AT SLAB EDGES INCLUDING CONSTRUCTION AND OTHER JOINTS, AT LEAST ONE REINFORCING BAR OR FABRIC WIRE SHALL BE LOCATED PARALLEL TO AND WITHIN 75mm OF THE SLAB EDGE.

C19 CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE APPROVED OR PERMITTED BY THE ENGINEER.

C20 SAWN JOINTS SHALL BE MADE AT A TIME APPROPRIATE TO THE CONCRETE MIX AND CLIMATIC CONDITIONS, GENERALLY BETWEEN 10 AND 20 HOURS OF PLACING THE CONCRETE.

C21 STRIPPING OF FORMS AND REMOVAL OF FORMWORK SHALL TAKE PLACE IN ACCORDANCE WITH A PROCEDURE AGREED TO BY THE ENGINEER.

C22 CONCRETE MUST BE SEPARATED FROM SUPPORTING MASONRY WORK BY TWO LAYERS OF A SUITABLE DE-BONDING MEMBRANE.

C23 SUSPENDED SLABS SHALL BE GIVEN AN UPWARD MID-SPAN CAMBER OF 3mm PER 1000mm U.N.O. BEAMS SHALL BE AS SHOWN ON DRAWINGS.

C24 SPLICES IN REINFORCEMENT SHALL BE MADE IN THE POSITIONS SHOWN ON THE DRAWINGS OR AS OTHERWISE APPROVED BY THE ENGINEER.

C25 HOLDING-DOWN BOLTS SHALL BE SUPPLIED TO THE CONCRETOR FOR CASTING INTO THE CONCRETE AND SHALL BE INSTALLED IN ACCORDANCE WITH THE STEEL HOLDING-DOWN BOLT PLAN.

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SPA - STRUCTURAL DRAWINGS | **FOR CONSTRUCTION** | **GENERAL NOTES**

CLIENT: --
JOB No: 2207185 | DRAWING No: S001
SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	21/07/22

STRUCTURAL STEELWORK:

S1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.

S2 ALL STEEL SHALL BE NEW AND FREE FROM WELDS AND BLEMISHES UNLESS APPROVED BY THE ENGINEER.

S3 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AS 4100 AND SAA/SNZ HB62.

S4 HOT-ROLLED AND WELDED PRODUCTS SHALL BE BHP-300PLUS AND PLATE SHALL BE GRADE 250 U.N.O.

S5 ALL WELDING SHALL BE IN ACCORDANCE WITH AS 1554.

S6 WELD TYPES ARE DESIGNATED AS FOLLOWS
CFW - CONTINUOUS FILLET WELD
FPBW - FULL PENETRATION BUTT WELD
PPBW - PARTIAL PENETRATION BUTT WELD

S7 ALL WELDS SHALL BE 6mm CONTINUOUS FILLET, CATEGORY GP, USING E41XX/W40X CONSUMABLES U.N.O.

S8 WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554 INSPECTED & CERTIFIED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH AS2214

S9 ALL HIGH-STRENGTH STRUCTURAL BOLTS SHALL BE M20 GRADE 8.8/S U.N.O. IN ACCORDANCE WITH AS 1252

S10 HOLDING-DOWN BOLTS SHALL BE M20 GRADE 4.6/S, GALVANISED U.N.O

S11 BOLTS MUST BE OF SUFFICIENT LENGTH TO HAVE AT LEAST ONE FULL THREAD EXPOSED AFTER TIGHTENING

S12 BOLTS IN OVERSIZE OR SLOTTED HOLES ARE TO HAVE SUITABLE LARGER SIZE WASHERS

S13 CONNECTIONS NOT SPECIFICALLY DETAILED SHALL BE IN ACCORDANCE WITH THE APPROPRIATE CONNECTION AS DETAILED IN THE AISC STANDARDISED STRUCTURAL CONNECTIONS MANUAL.

S14 UNLESS NOTED OTHERWISE CONNECTIONS BETWEEN 2 STRUCTURAL STEEL MEMBERS ARE TO HAVE MINIMUM 2M20 8.8/S BOLTS IN 22Ømm HOLES

S15 BOLT TYPES AND BOLTING PROCEDURE ARE DESIGNATED AS FOLLOWS
4.6/S - COMMERCIAL BOLTS TO AS 1111, SNUG TIGHTENED
8.8/S - HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND HARDENED WASHERS TO AS 1252, SNUG TIGHTENED
8.8/TB - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS 1511 IN A BEARING TYPE JOINT
8.8/TF - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS 1511 IN A FRICTION TYPE JOINT

S16 FULLY TENSIONED BOLTS ARE TO BE INITIALLY SNUG TIGHTENED, CONNECTING PLATES ADJUSTED TO FULL CONTACT, THEN TIGHTEN BOLTS TO AN ADDITIONAL HALF TURN IN ACCORDANCE WITH AS 4100
ALTERNATIVELY PROVIDE LOAD INDICATING WASHERS AND INSTALL CONNECTIONS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND AS 4100

S17 ALL CLEAT PLATES AND STIFFENERS SHALL BE 10mm THICK U.N.O.

S18 THE ENDS OF ALL TUBULAR MEMBERS SHALL BE SEALED WITH A 3mm PLATE U.N.O.

S19 TUBULAR MEMBERS TO BE GALVANISED SHALL BE ADEQUATELY VENTED.

S20 PURLINS AND GIRTS INCLUDING LATERAL AND BUCKLING RESTRAINING MEMBERS SUCH AS BRIDGING, STRUTS AND TIE RODS SHALL BE IN ACCORDANCE WITH AS/NZS 4600, GALVANISED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

S21 BEFORE COMMENCING FABRICATION 3 COPIES OF THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THIS REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS.

S22 CAMBER SHALL BE AS NOTED ON THE DRAWINGS.

S23 STRUCTURAL STEEL TO BE CONCRETE ENCASED SHALL BE WRAPPED WITH F41 MESH. THE GAP BETWEEN THE STRUCTURAL STEEL AND THE MESH AND AND THE THE EXTERNAL COVER TO THE MESH SHALL BE 25mm AND 50mm RESPECTIVELY.

S24 ALL BOLTS AND STRUCTURAL STEEL EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANISED U.N.O. PAINT SYSTEMS TO GALVANISED STEEL TO BE AS SPECIFIED BY THE ARCHITECT

S25 ALL STEEL LINTELS SUPPORTING MASONRY EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANISED.

S26 PROVIDE ALL NECESSARY CLEATS AND HOLES REQUIRED TO FIX TIMBER AND OTHER MATERIALS AND FINISHES TO THE STEELWORK.

S27 LINTELS SHALL NOT BE PROPPED DURING LOAD APPLICATION U.N.O.

S28 THE CONTRACTOR SHALL PROVIDE AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED, SUCH TEMPORARY BRACING AS IS NECESSARY TO ADEQUATELY STABILIZE THE STRUCTURE DURING ERECTION.

S29 PROVIDE 150mm MINIMUM END BEARING WITH 20mm NOM. LEVELLING GROUT U.N.O. TO STEELWORK SEATED ON MASONRY. CHARACTERISTIC COMPRESSIVE STRENGTH OF GROUT IS 30MPa

S30 PROTECTIVE COATINGS TO INTERNAL STEELWORK (U.N.O.):

PREPARATION:	CLASS 2A ABRASIVE BLAST
COATING:	
FIRST COAT	INORGANIC ZINC SILICATE 75 DRY FILM THICKNESS
SECOND COAT	ACRYLIC PAINT 50 DRY FILM THICKNESS
THIRD COAT	ACRYLIC PAINT 50 DRY FILM THICKNESS

CONCRETE ENCASED AND FIRE-SPRAYED MEMBERS, AND FRICTION-GRIP BOLTED CONNECTIONS MUST NOT BE PAINTED. U.N.O.

S31 COATINGS DAMAGED DURING TRANSPORT AND ERECTION OR BY WELDING SHALL BE MADE GOOD AFTER BEING WIRE-BRUSHED CLEAN, AND RECOATED AS ABOVE.

S32 REFER TO ARCHITECTURAL DRAWINGS FOR ALL ADDITIONAL PLATES, ANGLES ETC. AS REQUIRED FOR FIXINGS TO INTERNAL PARTITIONS, BLOCKING, WINDOW FRAMES, ARCHITECTURAL FEATURES ETC

S33 PROVIDE ALL NECESSARY TRIMMING ANGLES AND FIXINGS TO SUPPORT CLADDING AND FLASHINGS AT ROOF OR WALL INTERSECTIONS

S34 PROVIDE ALL NECESSARY SUBFRAMES AND TRIMMERS FOR MECHANICAL AND ELECTRICAL EQUIPMENT AND ARCHITECTURAL FEATURES

S35 SUPPORT ROOF BRACING FROM EVERY SECOND PURLIN WITH HOOK BOLTS

SPA MAUFACTURE:

CONSTRUCTION SEQUENCE :

STEP 1. VACUUM FORM USING 4.75MM ARISTECH ACRYLIC SHEET

STEP 2 FIRST COATING 1.5MM - 2MM USING APPROX. 40:60 RATIO (GLASS TO RESIN)
FIBREGLASS PRAY UP ROVING : 110P VINYL ESTER RESIN
CATALYST M50 (1.8% - 2%)

STEP 3. OVEN CURE AT 35-40 DEGREES CELSIUS

STEP 4. SECOND COATING 4MM - 8MM USING APPROX. 40:60 RATIO (GLASS TO RESIN)
FIBREGLASS PRAY UP ROVING : 279P POLYESTER RESIN
CATALYST 388 (1.8% - 2%)
CALCIUM CARBONATE FILLER ON SECOND LAYER

NOTES

SWIMMING POOL AND SPA SAFETY TO FOLLOW THE GUIDELINES OF PN-05-2018 PUBLISHED BY VBA.

BARRIERS AND LOCATION OF BARRIERS TO BE DESIGNED TO REQUIREMENTS OF AS 1926.1-2012 AND AS 1926.2-2007, SWIMMING POOL SAFETY - SAFETY BARRIERS FOR SWIMMING POOLS.

DESIGN AND INSTALL POOLS AND SPAS MANUFACTURED FROM FIBREREINFORCED PLASTIC MATERIALS, WITH VOLUMES EXCEEDING 7500L AND DEPTHS GREATER THAN 750MM, TO REQUIREMENTS OF AS/NZS 1838:1994, SWIMMING POOLS - PREMOULDED FIBRE-REINFORCED PLASTICS - DESIGN AND FABRICATION.

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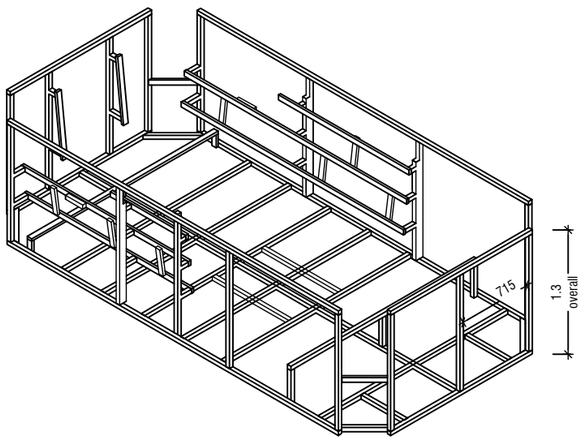
SPA - STRUCTURAL DRAWINGS | **FOR CONSTRUCTION** | **GENERAL NOTES**

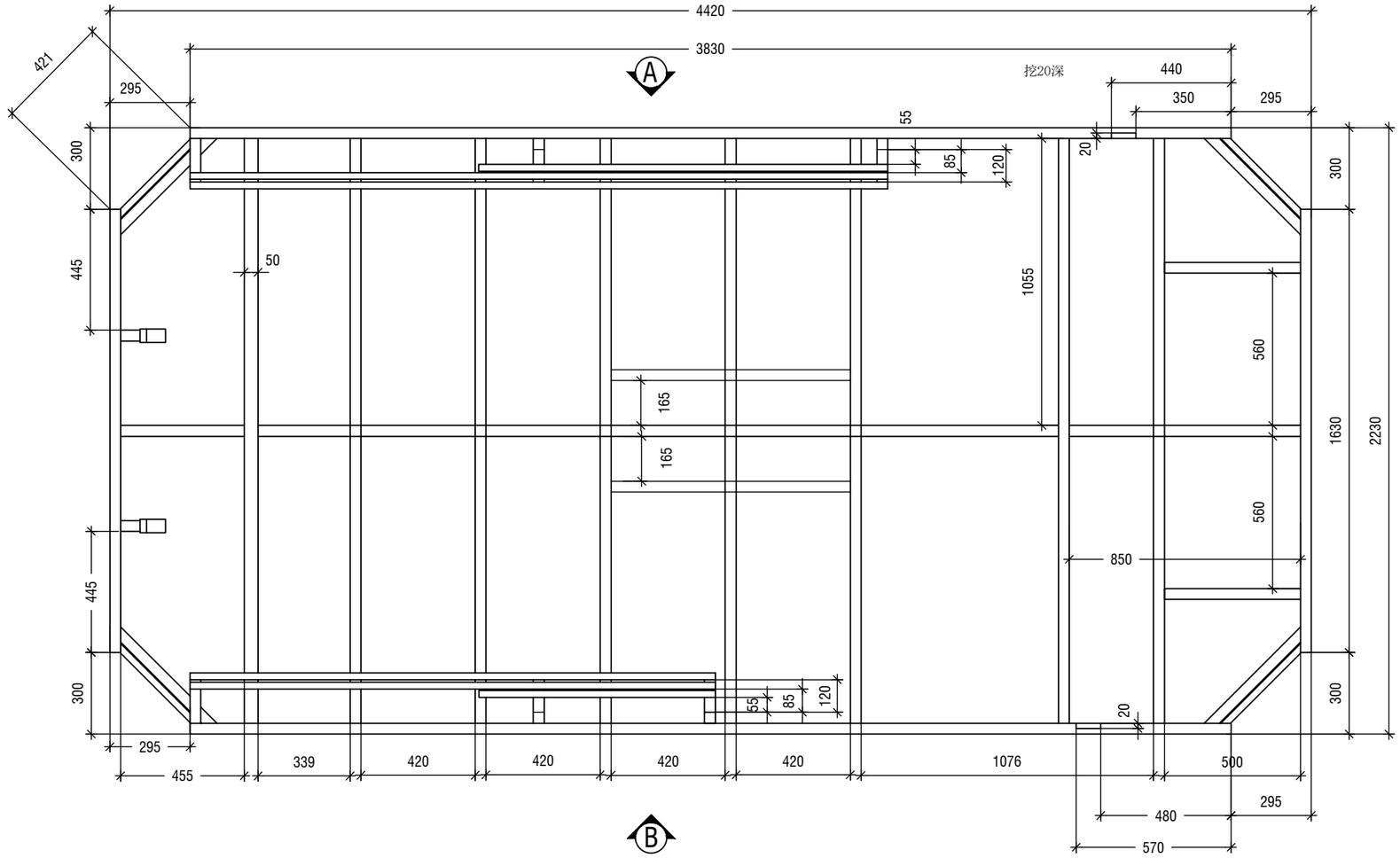
CLIENT: --
JOB No: 2207185 | DRAWING No: S002
SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	21/07/22

NOTE:
AQUAGYM MAX 1.3 FRAME TO BE FULLY WELDED WITH 8-10MM. CONTINUOUS FILLET WELD (CFW)UNLESS NOTED OTHERWISE.



PERSPECTIVE VIEW
NTS



AQUAGYM MAX 1.3 FRAMING PLAN
SCALE 1:20

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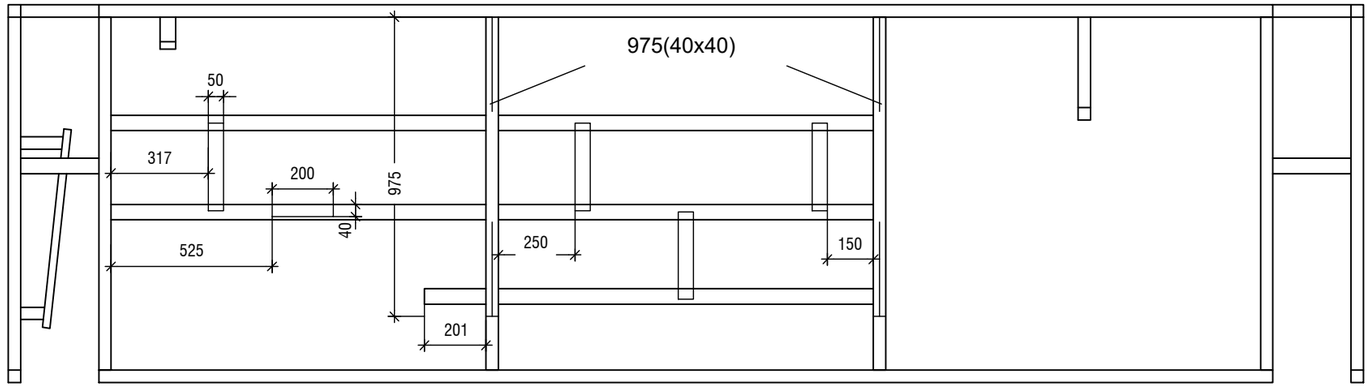
SPA - STRUCTURAL DRAWINGS | **FOR CONSTRUCTION** | **AQUAGYM MAX 1.3 FRAMING PLAN**

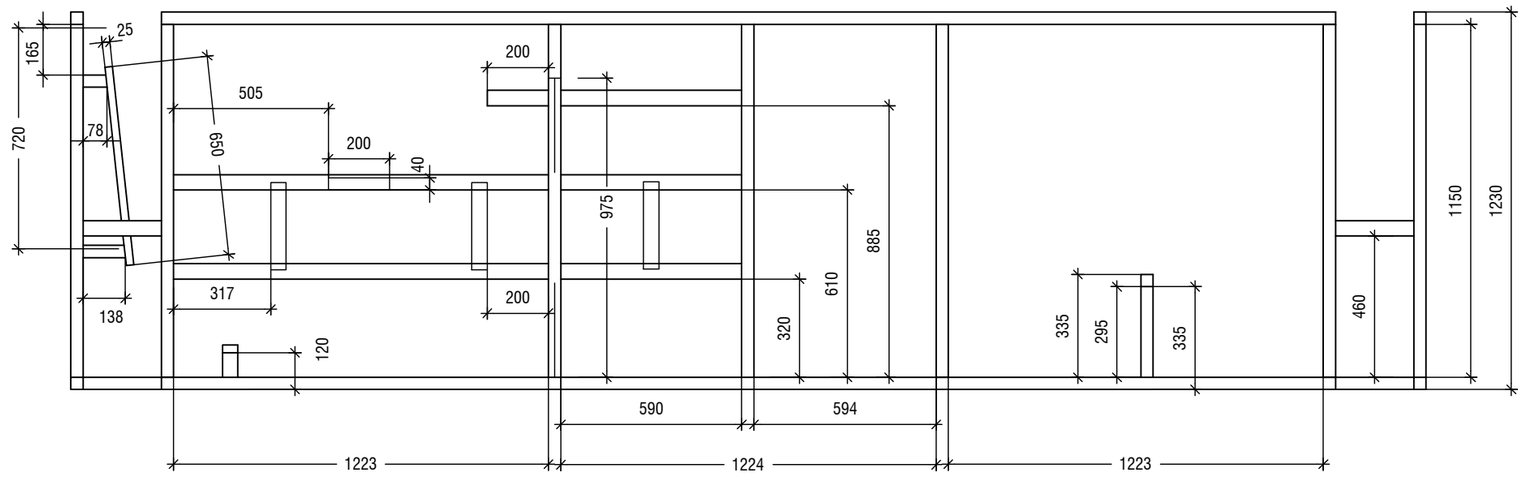
CLIENT:--
JOB No: 2207185 DRAWING No: S101
SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	21/07/22



AQUAGYM MAX 1.3 FRAMING ELEVATION-A

SCALE 1:20



AQUAGYM MAX 1.3 FRAMING ELEVATION-A

SCALE 1:20

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SPA - STRUCTURAL DRAWINGS

FOR CONSTRUCTION

AQUAGYM MAX 1.3 FRAMING ELEV.

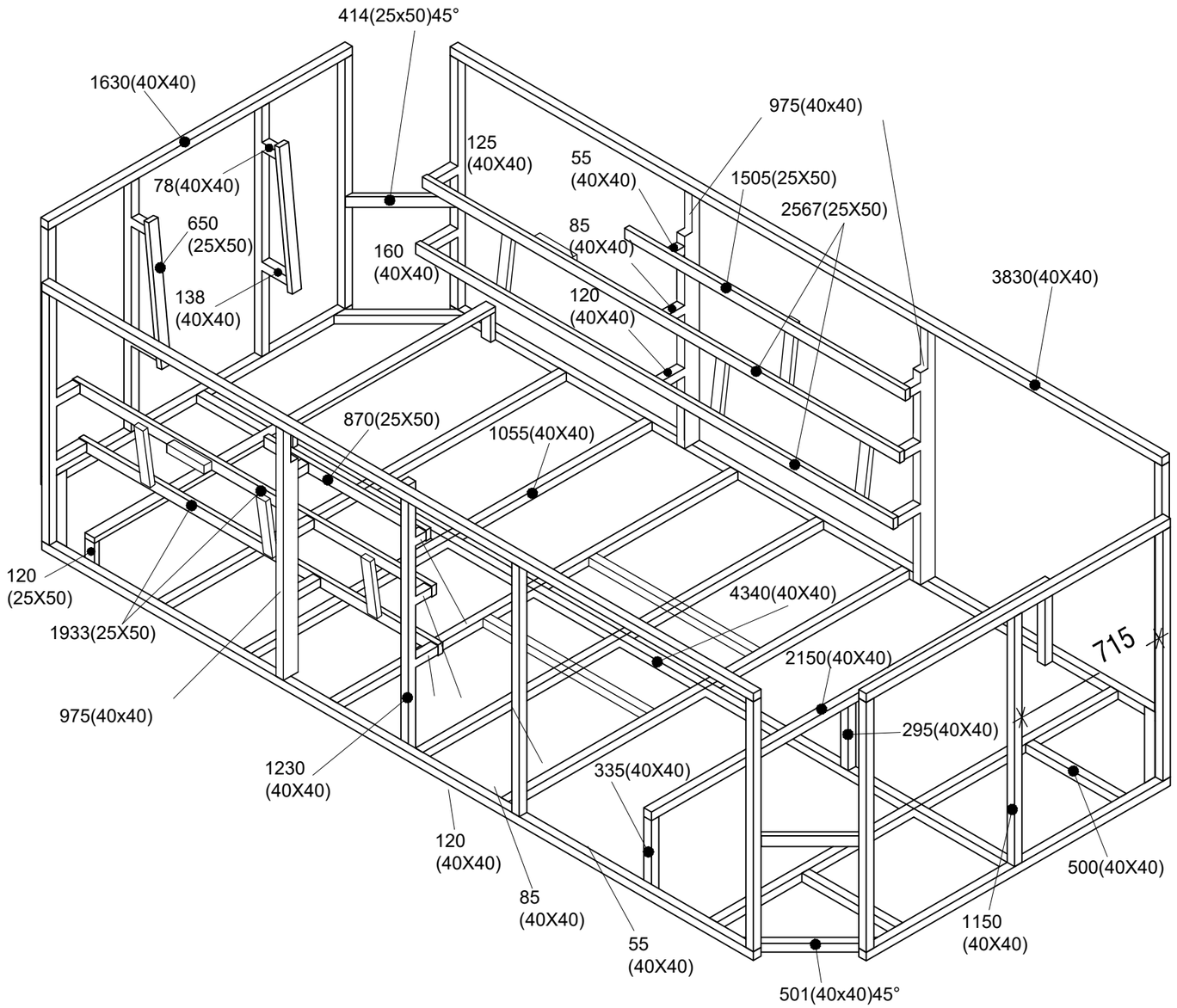
CLIENT:--

JOB No: 2207185 DRAWING No:

S102

SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	21/07/22



PERSPECTIVE VIEW

NTS

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SPA - STRUCTURAL DRAWINGS	**FOR CONSTRUCTION**	**AQUAGYM MAX 1.3 PERSPECTIVE**	CLIENT:--	S103
			JOB No: 2207185 DRAWING No:	
			SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS	

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	21/07/22

BARRASON'S ENGINEERS
Structural and Civil Consultants

Building Act 1993
Section 238(1)(a)
Building Regulations 2018

REGULATION 126: CERTIFICATE OF COMPLIANCE—Proposed Building Works

This certificate is issued to:

T.B.A.

This certificate is issued in relation to the proposed building works at

Aquagym Max 1500 Spa Series: Aquagym Max 1500 Plunge, Aquagym Max 1500 Pro, Aquagym Max 1500 Pro +, Aquagym Max 1500 Extreme

Nature of proposed work:

Construction of a spa frame

Building classification as per NCC 2019:

Part of building: SPA Framing BCA Classification:10b

Prescribed class of building work for which this certificate is issued:
Design or part of the design of building work relating to this structural matter

Documents setting out the design that is certified by this certificate:
Drawings: Ref: 2207186 Sheet: S000-002, S101-103 Date:20/07/2022
Prepared by:B.E Barrason's Engineers

The design certified by this certificate complies with the following provisions of the Australian Building Act 1993, Building Regulations 2018 or National Construction Code:
Part 3.2, 3.4 & 3.11 of the NCC 2019 including relevant Australian Standards:
AS1170.0, AS1170.1, AS1170.2, AS1684.2 AS1684.4, AS1720.1, AS2870, AS3600, AS3700, AS3850, AS4100, AS4055, AS4671, AS4773.1

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 required to do so.

Engineer:

Name: Andrew Barraclough
email: admin@barrasons.com.au
Building Practitioner number:
Company VBA registration:

Registrations: FIEAUST, CPEng, NER, RBP
Qualifications: BEng MEng PhD
EC-46301 RPEQ 22822
CEC-53929 PE0000600

Signed:
Andrew Barraclough

Date of issue of certificate: 20/07/2022

SPAWORLD
CONSTRUCTION DRAWINGS

Sheet Index

Layout ID	Layout Name
S000	Title Sheet
S001	General Notes P1
S002	General Notes P2
S101	Framing Plan
S102	Framing Elevations
S103	Perspective

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SPA - STRUCTURAL DRAWINGS

FOR CONSTRUCTION

COVER SHEET

CLIENT: --

JOB No: 2207186

DRAWING No:

S000

SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	20/07/22

GENERAL:

1. ALL CONSTRUCTION WORKS AND MATERIALS TO CONFORM WITH THE ENGINEER SPECIFICATION AND AUSTRALIAN STANDARDS AND THE CURRENT BUILDING CODE OF AUSTRALIA.
2. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, AND LEVELS SHOWN ARE A.H.D. (AUSTRALIAN HT. DATUM)
3. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS
4. DRAWING ARE NOT TO BE SCALED.RELEVANT DIMENSIONS TO BE CONFIRMED ON SITE BY BUILDER BEFORE COMMENCEMENT OF WORKS
5. ANY DISCREPANCIES OR QUERIES SHOULD BE REFERRED TO THE BARRASONSENGINEERS FOR CLARIFICATIONS PRIOR TO COMMENCEMENT OF WORKS.
6. THE CONTRACTOR SHALL LIAISE WITH WITH ANY BUILDING/ PROPERTY OWNERS AS REQUIRED TO ENSURE MINIMAL DISRUPTIONS TO SERVICES. AND THAT SPECISL REQUIREMENTS OF THE OWNERS ARE ADHERED TO.

FOOTINGS AND SLAB ON GROUND

F1. ALL WORK AND MATERIALS TO COMPLY WITH AS2870.

F2. ALL FOOTINGS SHALL BE FOUNDED ON FIRMED SOIL. PRIOR TO COMENCING WORK, THE BUILDER IS TO FAMILARISE THE CONTENT OF THE SOIL REPORT PREPARED BY: --
REPORT No.: -- DATED: --
FOOTING DEPTHS SPECIFIED ON THE DRAWINGS ARE MINIMUM DIMENSIONS ONLY. IF NOT SHOWN, REFER TO THE SOIL REPORT FOR THE REQUIRED FOUNDING DEPTH.

F3. THE SITE HAS BEEN CLASSIFIED AS CLASS '-- ' IN ACCORDANCE WITH AS 2870.

F4. STRIP / PAD FOOTINGS ARE TO BE FOUNDED ON ORIGINAL UNDISTURBED GROUND WITH AN ALLOWABLE BEARING CAPACITY OF -- kPa.

F5. EDGE BEAMS AND LOAD BEARING RIBS SHALL BE FOUNDED ON UNDISTURBED GROUND WITH AN ALLOWABLE BEARING CAPACITY OF -- kPa. THE INTERNAL SLAB & NON-LOAD BEARING RIBS SHALL BE FOUNDED ON SOIL WITH MINIMUM BEARING CAPACITY OF -- kPa.

F6. ALL ORGANIC MATERIAL SHALL BE REMOVED FROM THE AREA BENEATH THE SLABS ON GROUND. THE GROUND SHALL BE PROOF ROLLED WITH A 3 TONNE ROLLER PRIOR TO PLACING COMPACTED FILL.
ANY SOFT SPOTS SHALL BE DUG OUT AND REPLACED WITH COMPACTED CRUSHED ROCK OR 15MPa BLINDING CONCRETE. IN ACCORDANCE WITH AS2870 AND AS3798.

F7. UNLESS OTHERWISE SPECIFIED IN THE SOIL REPORT, FILLING USED IN THE CONSTRUCTION OF THE SLAB EXCEPT WHERE THE SLAB IS SUSPENDED SHALL CONSIST OF CONTROLLED FILL OR ROLLED FILL AS FOLLOWS:
a. CONTROLLED FILL IS MATERIAL THAT HAS BEEN PLACED AND COMPACTED IN LAYERS BY COMPACTION EQUIPMENT WITHIN DEFINED DENSITY REQUIREMENT. EXCEPT AS PROVIDED BELOW, CONTROLLED FILL SHALL BE PLACED IN ACCORDANCE WITH AS 3798.
SAND FILL UP TO 0.8m DEEP, WELL COMPACTED IN NOT MORE THAN 0.3m THICK LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER, SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT. A SATISFACTORY TEST FOR SAND FILL NOT CONTAINING GRAVEL SIZED MATERIAL IS THE ACHIEVEMENT OF A BLOW COUNT OF 7 OR MORE PER 0.3m USING THE PENETROMETER TEST DESCRIBED IN AS 1289.6.3.3.
NON-SAND FILL UP TO 0.4m DEEP, WELL COMPACTED IN NOT MORE THAN 0.15m LAYERS BY A MECHANICAL ROLLER SHALL BE DEEMED TO COMPLY WITH THIS REQUIREMENT.
CLAY FILL SHALL BE MOIST DURING COMPACTION.
b. ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR.
ROLLED FILL SHALL NOT EXCEED 0.6m COMPACTED IN LAYERS NOT MORE THAN 0.3m THICK FOR SAND OR 0.3m COMPACTED IN LAYERS NOT MORE THAN 0.15m THICK FOR OTHER MATERIAL
c. THE EXTENT OF CONTROLLED FILL AND ROLLED FILL REQUIRED SHALL BE DETERMINED ON SITE IN ACCORDANCE WITH SECTION 6 OF AS2870 AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR & BUILDER.

F8. WHERE DEPTH OF CONTROLLED FILL IS THICKER THAN THAT SPECIFIED ABOVE, FILL MATERIAL SHALL BE SPREAD AND COMPACTED IN UNIFORM LAYERS NOT EXCEEDING 0.15m THICK. TOP SURFACE LAYER SHALL BE COMPACTED TO MINIMUM 98% STANDARD DRY DENSITY DETERMINED BY METHODS IN ACCORDANCE WITH AS1289. LOWER LAYERS SHALL BE COMPACTED TO 95% STANDARD DRY DENSITY. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADJUSTED TO WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT DURING COMPACTION TO ENSURE THAT THE SPECIFIED COMPACTION IS OBTAINED. COMPACTION TESTS SHALL BE CARRIED OUT AT A RATE OF ONE TEST PER LAYER PER 100 SQUARE METRES OF FILL. TESTS ARE TO BE CARRIED OUT BY INDEPENDENT NATA REGISTERED LABORATORIES. SUBMIT REPORT TO THIS OFFICE FOR APPROVAL.

F9. FOUNDATIONS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR BUILDING INSPECTOR BEFORE LAYING MEMBRANES AND POURING CONCRETE. IF AN UNUSUAL GROUND CONDITION IS ENCOUNTERED DURING THE SITE EXCAVATION, REPORT TO THIS OFFICE FOR RESOLUTION.

F10. NO EXCAVATION IS TO BE TAKEN BELOW THE BASE OF ADJACENT / EXISTING FOOTINGS. IF IT IS UNAVOIDABLE, FOR THE CASE OF NEW FOOTINGS, BLINDING CONCRETE GRADE 15MPa SHALL BE PROVIDED BENEATH THE NEW FOOTING AND FOUNDING BELOW ANGLE OF REPOSE. FOR THE CASE OF EXISTING FOOTINGS, UNDERPINNING IS REQUIRED. REFER TO THIS OFFICE FOR DETAILS.

F11. ALL FOUNDATIONS ARE TO BE FREE OF WATER AND LOOSE MATERIAL

F12. OVER EXCAVATION IS TO BE FILLED TO THE UNDERSIDE OF FOOTINGS WITH 15MPa BLINDING CONCRETE

F13. TERMITE PROTECTION SHALL BE PROVIDED AS REQUIRED BY AUSTRALIAN STANDARD AND THE LOCAL STATUTORY AUTHORITY.

F14. A 0.2mm POLYTHENE MEMBRANE SHALL BE CONTINUOUS UNDER SLAB AND RIBS LAPPED 200mm MINIMUM WHERE REQUIRED AND TAPED AT ALL SERVICE PENETRATIONS, LAPS AND PUNCTURES. THE MEMBRANE IS TO EXTEND UNDER AND TO THE SIDES OF SLABS, BEAMS AND THICKENINGS.

F15. EXCAVATIONS NEAR THE BUILDING EDGE SHALL BE BACKFILLED IN SUCH A MANNER TO PREVENT READY ACCESS OF WATER TO THE FOUNDATIONS

F16. SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS FOLLOWS :
- Y GRADE 400MPa DEFORMED REINFORCING BARS TO AS 1302.
- N GRADE 500MPa DEFORMED REINFORCING BARS, DUCTILITY CLASS N TO AS 4671
- R GRADE 250MPa PLAIN REINFORCING BARS TO AS 1302
- TM HARD-DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671
- RL RECTANGULAR RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671
- SL SQUARE RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671

F17. FABRIC SHALL BE PLACED NEAR THE TOP OF THE SLAB AND SHALL HAVE A NOMINAL COVER OF 25mm U.N.O.

F18. REINFORCEMENT FABRIC SHALL BE LAPPED SO THAT EACH PAIR OF TRANSVERSE WIRES AT THE EDGE OF ONE SHEET OVERLAPS EACH CORRESPONDING PAIR OF TRANSVERSE WIRES OF THE SHEET BEING LAPPED. REINFORCEMENT SHALL BE SUPPORTED IN POSITION PRIOR TO CONCRETING COMMENCING ON DENSE PRECAST CONCRETE SPACER BLOCKS OR BAR CHAIRS ON GALVANIZED STEEL DISHES (EITHER OF WHICH MUST NOT DAMAGE THE MEMBRANE) AT 900mm MAXIMUM CENTRES EACH WAY TRAMPING IN FABRIC IS NOT PERMITTED

F19 BEAM AND STRIP FOOTING REINFORCEMENT SHALL HAVE A NOMINAL COVER OF 50mm.

F20. TRENCH MESH SHALL BE LAID CONTINUOUSLY AND SHALL BE SPLICED WHERE NECESSARY WITH A MINIMUM LAP OF 500mm

F21. TRENCH MESH SHALL BE OVERLAPPED BY THE WIDTH OF FABRIC AT CORNERS AND INTERSECTIONS. THE ENDS OF TRENCH MESH SHALL TERMINATE WITH A CROSSBAR.

F22. PROVIDE 2N12 x 1200 BARS OR EQUIVALENT TRENCH MESH x 2000 LONG DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLAB AND TIED TO UNDERSIDE OF TOP FABRIC.

F23. CONCRETE STRENGTH IS TO BE f'c = 25MPA, WITH 65 MAX. SLUMP, COMPACTED USING MECHANICAL VIBRATION. SLAB & RIBS ARE TO BE CAST IN ONE CONTINUOUS POUR AND THE SLAB IS TO BE STEEL-FLOAT FINISHED

F24. ALL CONCRETE IS TO BE CONTINUOUSLY WET-CURED FOR 7 DAYS.

F25. THE GROUND SURROUNDING SLABS SHALL HAVE THE SURFACE AT LEAST 150mm LOWER THAN THE SLAB AND BE SLOPED AWAY FROM THE SLAB EDGE SO THAT WATER WILL DISCHARGE TO SUITABLE DRAINAGE POINTS AND NOT FLOOD THE SLAB SURFACE.

F26. HOT WATER HEATING PIPES MAY BE EMBEDDED IN THE SLAB PROVIDED THAT THE SLAB THICKNESS IS INCREASED BY 25mm AND LAID ON ADDITIONAL SL52 MESH.

CONCRETE:

C1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.

C2 UNLESS OTHERWISE SHOWN THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS FOLLOWS:

ELEMENT	CONC. STRENGTH (f'c) MPa	SLUMP mm
FOOTINGS	25	75
SLAB-ON-GROUND	25	65
COLUMNS	32	80
WALLS	40	85
SUSPENDED SLABS & BEAMS	32	80
MASS CONCRETE	15	-

C3 CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER PLACEMENT.

C4 CONCRETE SHALL BE COMPACTED USING MECHANICAL VIBRATION.

C5 VIBRATION OF FORMS IS NOT ACCEPTABLE AND CONCRETE SHALL NOT BE SPREAD BY VIBRATING.

C6 CONCRETE SECTIONS SHOWN ARE MINIMUM SIZES AND DO NOT INCLUDE FINISHES. SIZES SHALL NOT BE REDUCED IN ANY WAY OR HOLES FORMED OR MADE IN

C7 DEPTH OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS

C8 SLABS AND BEAMS ARE TO BE POURED CONCURRENTLY U.N.O. AND FINISHED WITH A STEEL FLOAT.

C9 POOL PAVERS CONCRETE AND MASONRY PAVERS SURROUNDING POOLS TO BE CONSTRUCTED TO REQUIREMENTS OF AS3727.1-2016, PAVEMENTS, PART 1: RESIDENTIAL.

C10 RECOMMENDED CONCRETE SLAB TO BE 150MM THICK, CONCRETE GRADE N32, SL82 REINFORCEMENT WITH 30MM COVER TO THE TOP SURFACE AND 40M SIDE COVER. MINIMUM SOIL ALLOWABLE BEARING CAPACITY TO BE 100KPA.

C11 MINIMUM COVER TO ALL REINFORCEMENT INCLUDING FITMENTS SHALL BE AS FOLLOWS, U.N.O:

ELEMENT	FORMED AND NOT EXPOSED TO WEATHER	FORMED ON GROUND & EXPOSED TO WEATHER	NOT FORMED. CAST AGAINST GROUND
INSITU COLUMN & PEDESTALS	40	50	75
INSITU BEAMS	40	50	65
FOOTINGS	-	50	75
PIERS	-	50	75
SLABS ON GROUND	20	30	65
SUSPENDED SLABS	20	30	65
INSITU WALLS	25	30	65
PRECAST WALLS	25	30	65
UNDERPINNING	-	50	75

C12 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT IN TRUE PROJECTION.
SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS FOLLOWS:

C13
- Y GRADE 400MPa DEFORMED REINFORCING BARS TO AS1302
- N GRADE 500MPa DEFORMED REINFORCING BARS, DUCTILITY CLASS N TO AS 4671
- R GRADE 250MPa PLAIN REINFORCING BARS TO AS1302
- W HARD-DRAWN STEEL REINFORCING WIRE, GRADE 500 DUCTILITY CLASS L TO AS 4671
- TM HARD-DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS 4671
- RL RECTANGULAR RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671
- SL SQUARE RIB MESH GRADE 500 DUCTILITY CLASS L TO AS 4671

C14 ALL REINFORCEMENT AND INSERTS SHALL BE SUPPORTED AND HELD IN THE DESIGN LOCATION BY APPROVED BAR CHAIRS, SPACERS OR TIES. BAR CHAIRS SHALL BE PLACED AT MINIMUM 1000 CENTRES IN TWO DIRECTIONS U.N.O.

C15 WELDING AND THREADING OF REINFORCEMENT IS NOT PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

C16 REINFORCEMENT SHALL BE EVENLY DISTRIBUTED OVER THE WIDTHS SHOWN U.N.O.

C17 PROVIDE 2-N12 x 1200 BARS DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLABS, TIED UNDER THE TOP FABRIC. U.N.O.

C18 AT SLAB EDGES INCLUDING CONSTRUCTION AND OTHER JOINTS, AT LEAST ONE REINFORCING BAR OR FABRIC WIRE SHALL BE LOCATED PARALLEL TO AND WITHIN 75mm OF THE SLAB EDGE.

C19 CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE APPROVED OR PERMITTED BY THE ENGINEER.

C20 SAWN JOINTS SHALL BE MADE AT A TIME APPROPRIATE TO THE CONCRETE MIX AND CLIMATIC CONDITIONS, GENERALLY BETWEEN 10 AND 20 HOURS OF PLACING THE CONCRETE.

C21 STRIPPING OF FORMS AND REMOVAL OF FORMWORK SHALL TAKE PLACE IN ACCORDANCE WITH A PROCEDURE AGREED TO BY THE ENGINEER.

C22 CONCRETE MUST BE SEPARATED FROM SUPPORTING MASONRY WORK BY TWO LAYERS OF A SUITABLE DE-BONDING MEMBRANE.

C23 SUSPENDED SLABS SHALL BE GIVEN AN UPWARD MID-SPAN CAMBER OF 3mm PER 1000mm U.N.O. BEAMS SHALL BE AS SHOWN ON DRAWINGS.

C24 SPLICES IN REINFORCEMENT SHALL BE MADE IN THE POSITIONS SHOWN ON THE DRAWINGS OR AS OTHERWISE APPROVED BY THE ENGINEER.

C25 HOLDING-DOWN BOLTS SHALL BE SUPPLIED TO THE CONCRETOR FOR CASTING INTO THE CONCRETE AND SHALL BE INSTALLED IN ACCORDANCE WITH THE STEEL HOLDING-DOWN BOLT PLAN.

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SPA - STRUCTURAL DRAWINGS | **FOR CONSTRUCTION** | **GENERAL NOTES**

CLIENT: --
JOB No: 2207186 | DRAWING No: S001
SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS

REVISION	AMENDED DESCRIPTION	DRAWN BY	DATE
A	For Construction Issue	B.E.	20/07/22

STRUCTURAL STEELWORK:

S1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.

S2 ALL STEEL SHALL BE NEW AND FREE FROM WELDS AND BLEMISHES UNLESS APPROVED BY THE ENGINEER.

S3 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AS 4100 AND SAA/SNZ HB62.

S4 HOT-ROLLED AND WELDED PRODUCTS SHALL BE BHP-300PLUS AND PLATE SHALL BE GRADE 250 U.N.O.

S5 ALL WELDING SHALL BE IN ACCORDANCE WITH AS 1554.

S6 WELD TYPES ARE DESIGNATED AS FOLLOWS
CFW - CONTINUOUS FILLET WELD
FPBW - FULL PENETRATION BUTT WELD
PPBW - PARTIAL PENETRATION BUTT WELD

S7 ALL WELDS SHALL BE 6mm CONTINUOUS FILLET, CATEGORY GP, USING E41XX/W40X CONSUMABLES U.N.O.

S8 WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS 1554 INSPECTED & CERTIFIED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH AS2214

S9 ALL HIGH-STRENGTH STRUCTURAL BOLTS SHALL BE M20 GRADE 8.8/S U.N.O. IN ACCORDANCE WITH AS 1252

S10 HOLDING-DOWN BOLTS SHALL BE M20 GRADE 4.6/S, GALVANISED U.N.O

S11 BOLTS MUST BE OF SUFFICIENT LENGTH TO HAVE AT LEAST ONE FULL THREAD EXPOSED AFTER TIGHTENING

S12 BOLTS IN OVERSIZE OR SLOTTED HOLES ARE TO HAVE SUITABLE LARGER SIZE WASHERS

S13 CONNECTIONS NOT SPECIFICALLY DETAILED SHALL BE IN ACCORDANCE WITH THE APPROPRIATE CONNECTION AS DETAILED IN THE AISC STANDARDISED STRUCTURAL CONNECTIONS MANUAL.

S14 UNLESS NOTED OTHERWISE CONNECTIONS BETWEEN 2 STRUCTURAL STEEL MEMBERS ARE TO HAVE MINIMUM 2M20 8.8/S BOLTS IN 22Ømm HOLES

S15 BOLT TYPES AND BOLTING PROCEDURE ARE DESIGNATED AS FOLLOWS
4.6/S - COMMERCIAL BOLTS TO AS 1111, SNUG TIGHTENED
8.8/S - HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND HARDENED WASHERS TO AS 1252, SNUG TIGHTENED
8.8/TB - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS 1511 IN A BEARING TYPE JOINT
8.8/TF - HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS 1511 IN A FRICTION TYPE JOINT

S16 FULLY TENSIONED BOLTS ARE TO BE INITIALLY SNUG TIGHTENED, CONNECTING PLATES ADJUSTED TO FULL CONTACT, THEN TIGHTEN BOLTS TO AN ADDITIONAL HALF TURN IN ACCORDANCE WITH AS 4100 ALTERNATIVELY PROVIDE LOAD INDICATING WASHERS AND INSTALL CONNECTIONS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND AS 4100

S17 ALL CLEAT PLATES AND STIFFENERS SHALL BE 10mm THICK U.N.O.

S18 THE ENDS OF ALL TUBULAR MEMBERS SHALL BE SEALED WITH A 3mm PLATE U.N.O.

S19 TUBULAR MEMBERS TO BE GALVANISED SHALL BE ADEQUATELY VENTED.

S20 PURLINS AND GIRTS INCLUDING LATERAL AND BUCKLING RESTRAINING MEMBERS SUCH AS BRIDGING, STRUTS AND TIE RODS SHALL BE IN ACCORDANCE WITH AS/NZS 4600, GALVANISED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS

S21 BEFORE COMMENCING FABRICATION 3 COPIES OF THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THIS REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS.

S22 CAMBER SHALL BE AS NOTED ON THE DRAWINGS.

S23 STRUCTURAL STEEL TO BE CONCRETE ENCASED SHALL BE WRAPPED WITH F41 MESH. THE GAP BETWEEN THE STRUCTURAL STEEL AND THE MESH AND AND THE THE EXTERNAL COVER TO THE MESH SHALL BE 25mm AND 50mm RESPECTIVELY.

S24 ALL BOLTS AND STRUCTURAL STEEL EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANISED U.N.O. PAINT SYSTEMS TO GALVANISED STEEL TO BE AS SPECIFIED BY THE ARCHITECT

S25 ALL STEEL LINTELS SUPPORTING MASONRY EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANISED.

S26 PROVIDE ALL NECESSARY CLEATS AND HOLES REQUIRED TO FIX TIMBER AND OTHER MATERIALS AND FINISHES TO THE STEELWORK.

S27 LINTELS SHALL NOT BE PROPPED DURING LOAD APPLICATION U.N.O.

S28 THE CONTRACTOR SHALL PROVIDE AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED, SUCH TEMPORARY BRACING AS IS NECESSARY TO ADEQUATELY STABILIZE THE STRUCTURE DURING ERECTION.

S29 PROVIDE 150mm MINIMUM END BEARING WITH 20mm NOM. LEVELLING GROUT U.N.O. TO STEELWORK SEATED ON MASONRY. CHARACTERISTIC COMPRESSIVE STRENGTH OF GROUT IS 30MPa

S30 PROTECTIVE COATINGS TO INTERNAL STEELWORK (U.N.O.):

PREPARATION:	CLASS 2A ABRASIVE BLAST
COATING:	
FIRST COAT	INORGANIC ZINC SILICATE 75 DRY FILM THICKNESS
SECOND COAT	ACRYLIC PAINT 50 DRY FILM THICKNESS
THIRD COAT	ACRYLIC PAINT 50 DRY FILM THICKNESS

CONCRETE ENCASED AND FIRE-SPRAYED MEMBERS, AND FRICTION-GRIP BOLTED CONNECTIONS MUST NOT BE PAINTED. U.N.O.

S31 COATINGS DAMAGED DURING TRANSPORT AND ERECTION OR BY WELDING SHALL BE MADE GOOD AFTER BEING WIRE-BRUSHED CLEAN, AND RECOATED AS ABOVE.

S32 REFER TO ARCHITECTURAL DRAWINGS FOR ALL ADDITIONAL PLATES, ANGLES ETC. AS REQUIRED FOR FIXINGS TO INTERNAL PARTITIONS, BLOCKING, WINDOW FRAMES, ARCHITECTURAL FEATURES ETC

S33 PROVIDE ALL NECESSARY TRIMMING ANGLES AND FIXINGS TO SUPPORT CLADDING AND FLASHINGS AT ROOF OR WALL INTERSECTIONS

S34 PROVIDE ALL NECESSARY SUBFRAMES AND TRIMMERS FOR MECHANICAL AND ELECTRICAL EQUIPMENT AND ARCHITECTURAL FEATURES

S35 SUPPORT ROOF BRACING FROM EVERY SECOND PURLIN WITH HOOK BOLTS

SPA MAUFACTURE:

CONSTRUCTION SEQUENCE :

STEP 1. VACUUM FORM USING 4.75MM ARISTECH ACRYLIC SHEET

STEP 2 FIRST COATING 1.5MM - 2MM USING APPROX. 40:60 RATIO (GLASS TO RESIN)
FIBREGLASS PRAY UP ROVING : 110P VINYL ESTER RESIN
CATALYST M50 (1.8% - 2%)

STEP 3. OVEN CURE AT 35-40 DEGREES CELSIUS

STEP 4. SECOND COATING 4MM - 8MM USING APPROX. 40:60 RATIO (GLASS TO RESIN)
FIBREGLASS PRAY UP ROVING : 279P POLYESTER RESIN
CATALYST 388 (1.8% - 2%)
CALCIUM CARBONATE FILLER ON SECOND LAYER

NOTES

SWIMMING POOL AND SPA SAFETY TO FOLLOW THE GUIDELINES OF PN-05-2018 PUBLISHED BY VBA.

BARRIERS AND LOCATION OF BARRIERS TO BE DESIGNED TO REQUIREMENTS OF AS 1926.1-2012 AND AS 1926.2-2007, SWIMMING POOL SAFETY - SAFETY BARRIERS FOR SWIMMING POOLS.

DESIGN AND INSTALL POOLS AND SPAS MANUFACTURED FROM FIBREREINFORCED PLASTIC MATERIALS, WITH VOLUMES EXCEEDING 7500L AND DEPTHS GREATER THAN 750MM, TO REQUIREMENTS OF AS/NZS 1838:1994, SWIMMING POOLS - PREMOULDED FIBRE-REINFORCED PLASTICS - DESIGN AND FABRICATION.

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SPA - STRUCTURAL DRAWINGS | **FOR CONSTRUCTION** | **GENERAL NOTES**

CLIENT: --
JOB No: 2207186 | DRAWING No: S002
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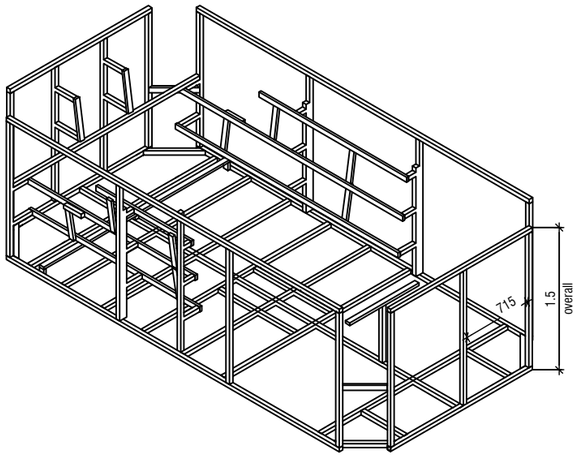
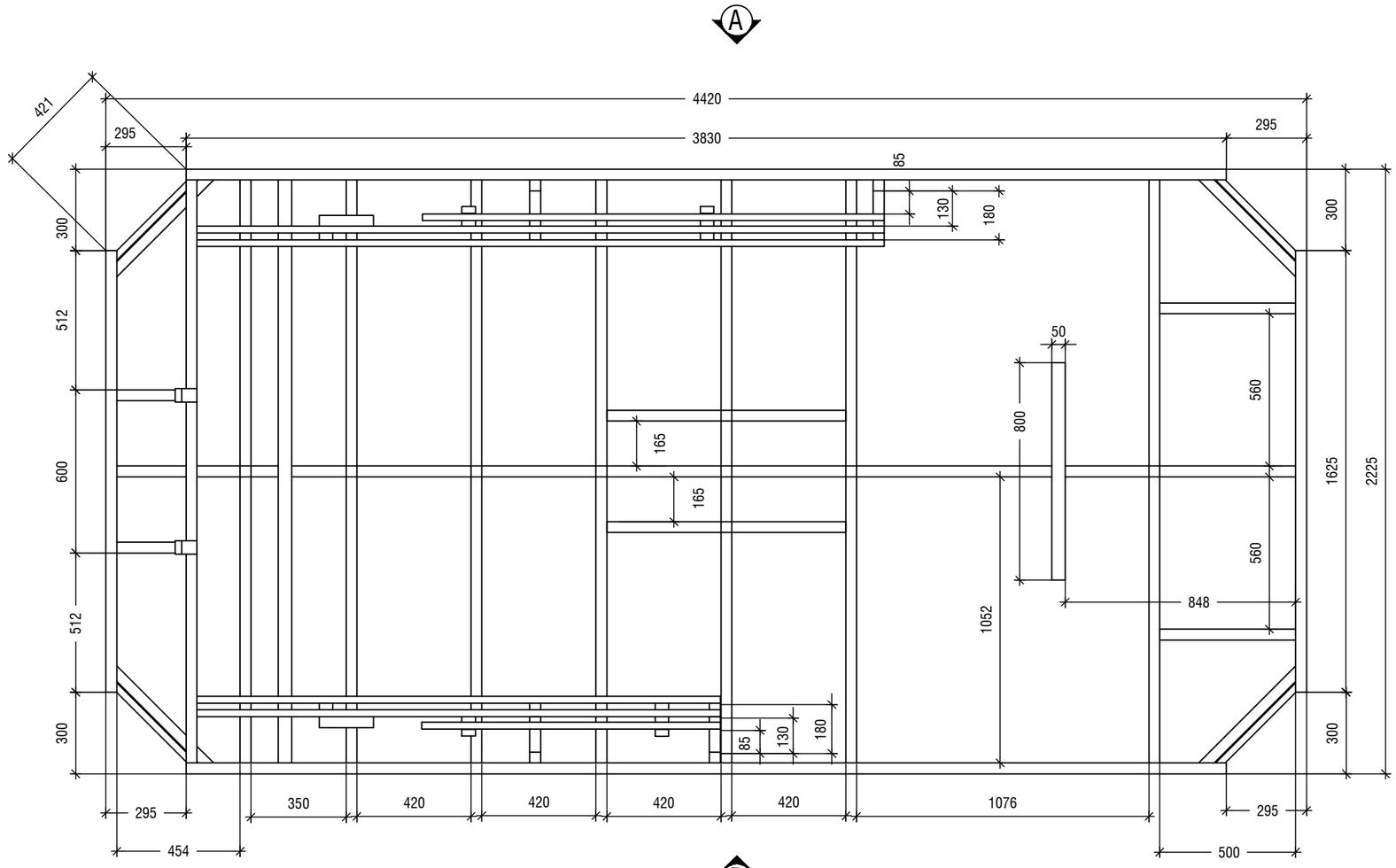
NOTE:
AQUAGYM MAX 1.5 FRAME TO BE FULLY WELDED WITH 8-10MM. CONTINUOUS FILLET WELD (CFW) UNLESS NOTED OTHERWISE.



PERSPECTIVE VIEW
NTS



AQUAGYM MAX 1.5 FRAMING PLAN
SCALE 1:20

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SPA - STRUCTURAL DRAWINGS	FOR CONSTRUCTION	AQUAGYM MAX 1.5 FRAMING PLAN	CLIENT:--	S101
			JOB No: 2207186 DRAWING No:	
			SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS	

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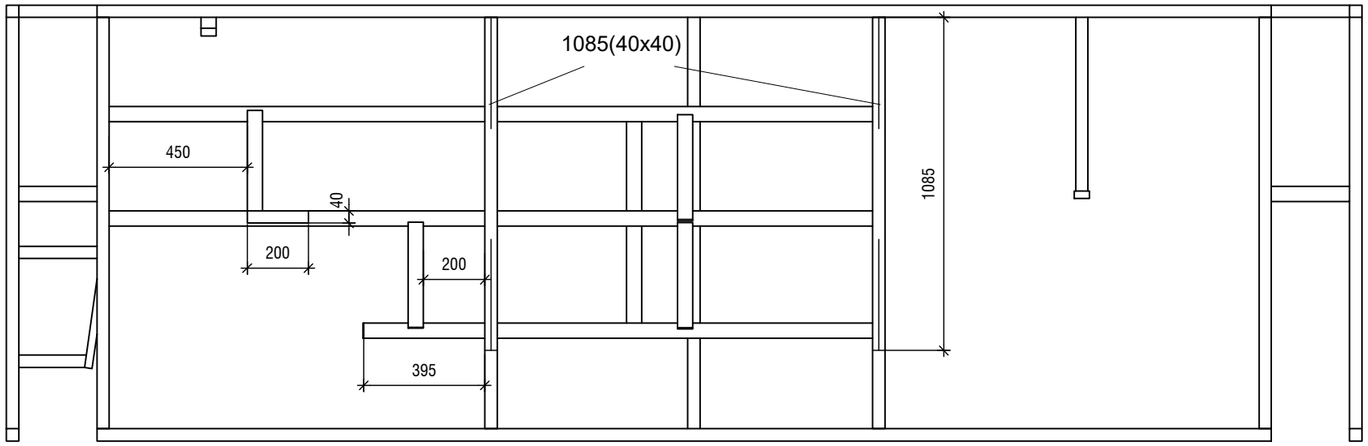
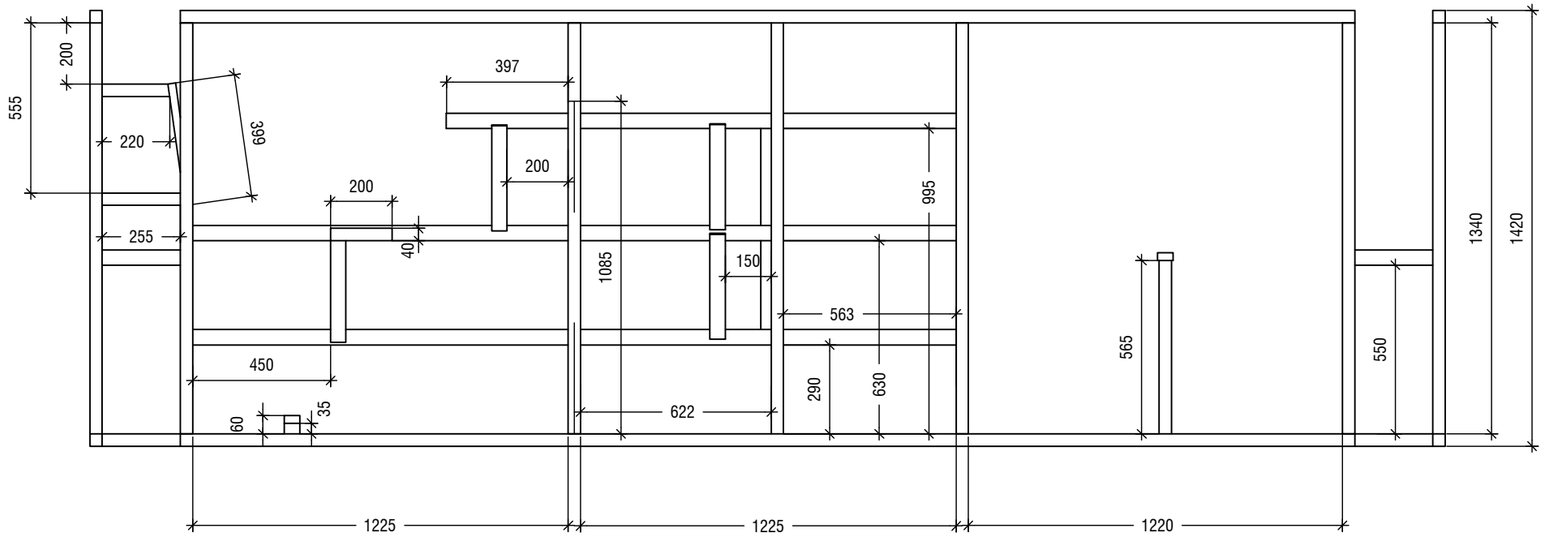


AQUAGYM MAX 1.5 FRAMING ELEVATION-A

SCALE 1:20



AQUAGYM MAX 1.5 FRAMING ELEVATION-A

SCALE 1:20

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SPA - STRUCTURAL DRAWINGS	**FOR CONSTRUCTION**	**AQUAGYM MAX 1.5 FRAMING ELEV.**	CLIENT:--	S102
			JOB No: 2207186 DRAWING No:	
			SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS	

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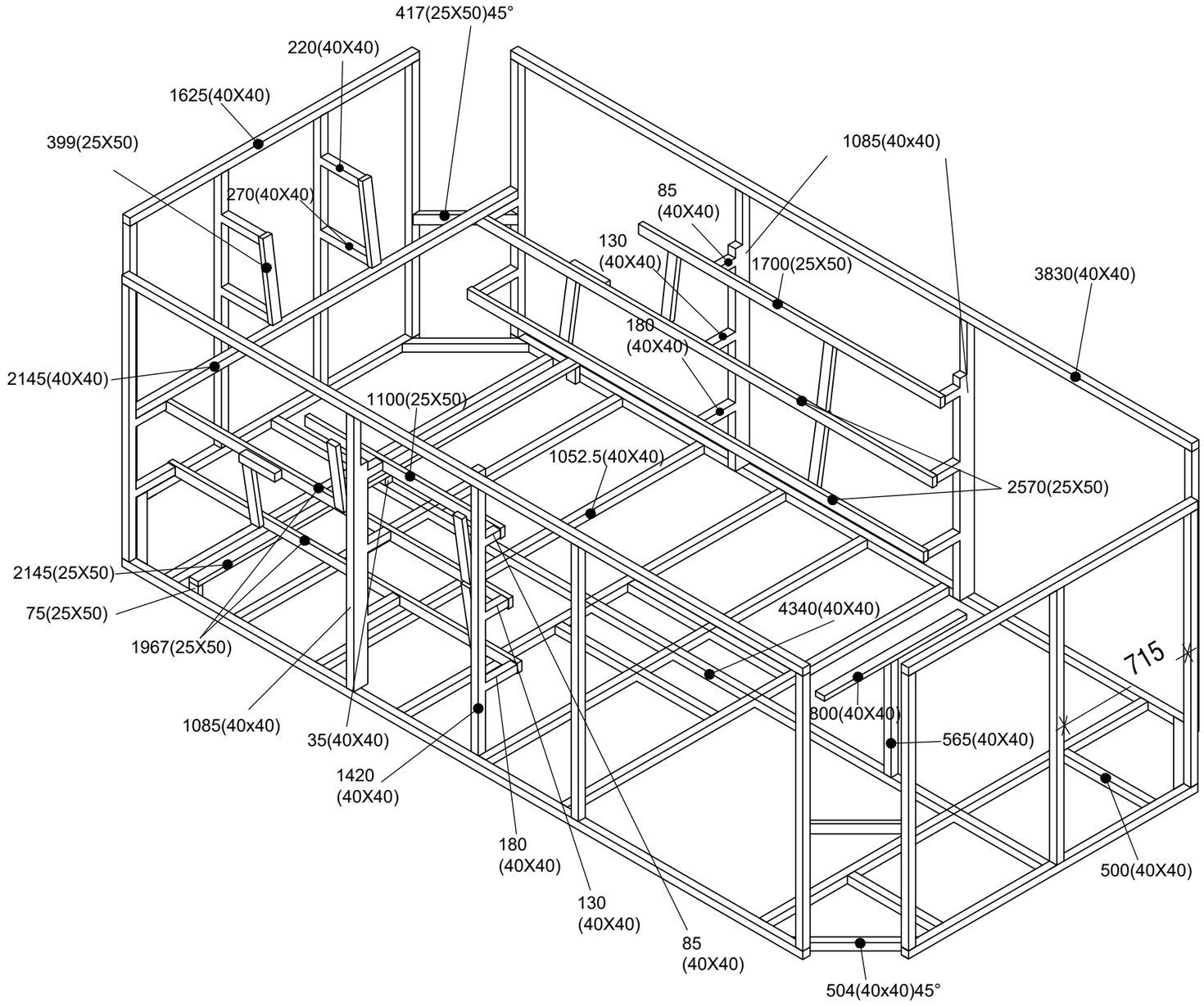

PERSPECTIVE VIEW

NTS

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SPA - STRUCTURAL DRAWINGS	**FOR CONSTRUCTION**	**AQUAGYM MAX 1.5 PERSPECTIVE**	CLIENT:--	S103
			JOB No: 2207186 DRAWING No:	
			SCALE: NOT TO SCALE - REFER TO ARCHITECTURAL DRAWINGS	

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