NumberBuilding Act 1993
Section 238(1)(a)
Building Regulations 2018
REGULATION 126: CERTIFICATE OF COMPLIANCE FOR PROPOSED BUILDING WORK

This certificate is issued to:
Relevant Building Surveyor:
Postal Address:
Email Address:

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

Address of Building: **Various in the state**

Nature of proposed building work:
Construction of a *GAZEBO* to NCC – BCA 2022 Volume 2
- Mimosa Outdoor Timber Gazebo (4.27m x 3.69m x 3.23m (H))

Building classification as per NCC 2022:
Class 10a (Gazebo)

Prescribed classes of building work for which this certificate is issued:
Design or part of the design of building work in relation to *structural matter*

Design & Reference Documents:

Ref. No.	Rev.	Date	Document Type	Pages	Prepared By
AJN-2023-008-D	*A*	*20/03/2023*	*Structural Drawings*	*S01*	*AJN Consulting Engineers*
AJN-2023-008-C	*A*	*20/03/2023*	*Structural Design Calculations*	*71*	*AJN Consulting Engineers*

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

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other Provision
NCC – BCA Vol. 2	*PART H1*
Australian Standards	*AS/NZS1170.0-2002, AS/NZS1170.1-2002, AS/NZS1170.2-2011, AS1720.1-2010, AS3600-2018, AS4100-1998.*

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:
Name: Juan Angelo Nogoy
Category and class: Engineer (Civil)
Registration No.: PE0002241
Address: 1/7 Blossom Lane, Werribee VIC 3030
Email: angelo.nogoy@gmail.com
Date of issue of certificate: **04/12/2023**

Signed:

v1.0

PILE DESIGN

Project No.	2023-008	Project Name	Mimosa Outdoor Gazebo (4.27m x 3.69m x 3.23m)
Designed by	AN	Date	20 March 2023

SUMMARY OF RESULTS

Required Pile Size	**450mm dia. x 1200mm deep**	
Required Ultimate Bearing Capacity of Soil	**100 kPa**	
Utilization Ratios:		
Uplift	82.0%	**OK**
Soil Bearing Pressure	55.0%	

1. Pile Properties

Diameter, D	450	mm
Depth, L	1200	mm
Cross Sectional Area, A	0.16	m^2
Unit Weight of Concrete, γ_{conc}	24	kN/m^3
Unit Weight of Soil, γ_{soil}	18	kN/m^3
Ultimate Bearing Capacity of Soil, B_n	100	kPa

2. Design Forces and Stresses

Maximum support reactions

Tension, T	3.38	kN
Compression, P	4.37	kN

3. Check against uplift

Strength reduction factor (concrete), Φ_{conc}	0.9	
Factored Weight of Concrete, ΦW_{conc}	4.12	kN

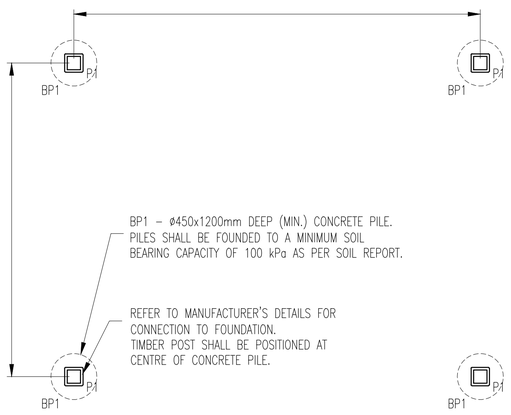
	ΦW_{conc}	**>**	**T**	**PASS**
Utilization Ratio	**ΦW_{conc} / T =**	**82.0%**		

4. Check soil bearing capacity

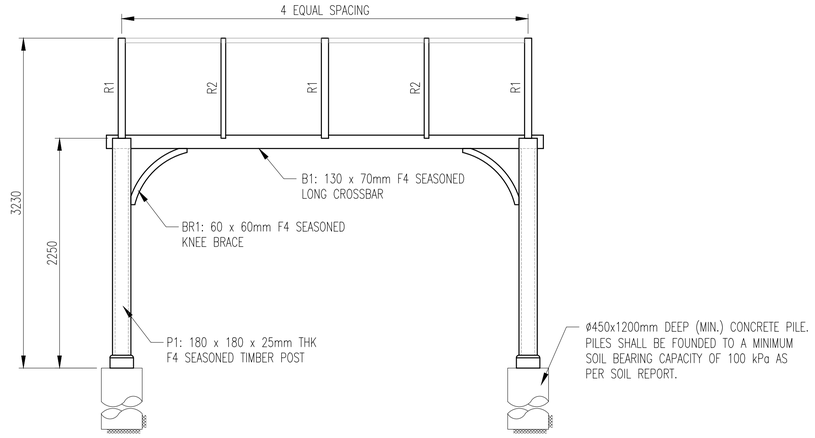
Maximum bearing pressure in soil, p	27.48	kPa
Strength reduction factor (soil), Φ_{soil}	0.5	
Factored Ultimate Bearing Capacity of Soil, ΦB_n	50	kPa

	ΦB_n	**>**	**p**	**PASS**
Utilization Ratio	**ΦB_n / p =**	**55.0%**		

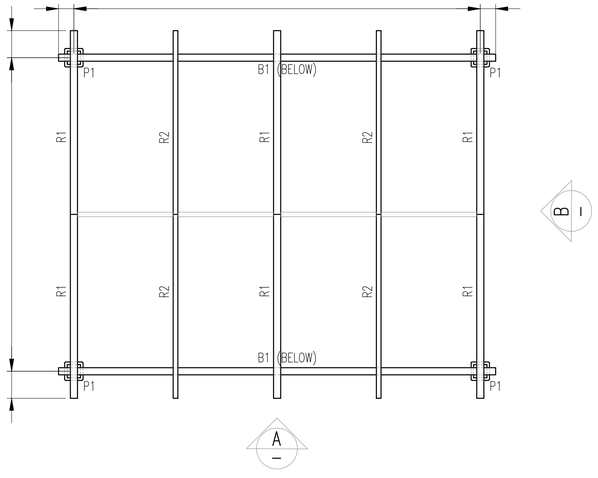
AJN-2023-008-D



FOUNDATION PLAN
SCALE: 1:30



LONGITUDINAL ELEVATION – A
SCALE: 1:30

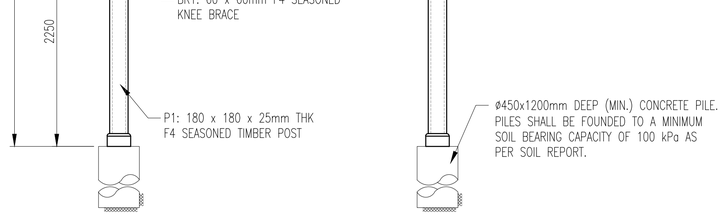


GAZEBO PLAN
SCALE: 1:30

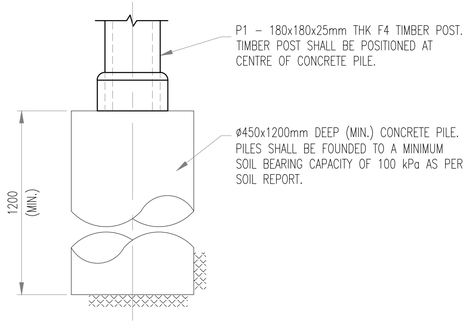
NOTE: ROOF AND TIMBER BATTENS ARE NOT SHOWN FOR CLARITY.
REFER TO MANUFACTURER'S DETAILS FOR CONNECTION DETAILS
AND EXACT SETTING OUT DIMENSIONS.

LEGEND:

B1	LONG CROSSBAR	130 x 70mm F4 SEASONED
B2	SHORT CROSSBAR	120 x 70mm F4 SEASONED
P1	POST	180 x 180 x 25mm THK F4 SEASONED
BR1	KNEE BRACE	60 x 60mm F4 SEASONED
R1	ROOF RAFTER	90 x 65mm F4 SEASONED
R2	INTERMEDIATE RAFTER	90 x 45mm F4 SEASONED



TRANSVERSE ELEVATION – B
SCALE: 1:30



TYPICAL PILE DETAIL
SCALE: 1:10

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS ON SITE, AND RESOLVE ALL DISCREPANCIES WITH THE ARCHITECT OR ENGINEER PRIOR TO COMMENCEMENT OF WORK.
2. DRAWING INDICATES GENERAL & TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE OF SIMILAR CHARACTER TO DETAILS SHOWN AND ALTHOUGH NOT SPECIFICALLY INDICATED, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS IN THE CONTRACT DRAWINGS. DISCREPANCIES IN DRAWINGS ARISING FROM SUCH VERIFICATION WORKS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ENSURING TOTAL COORDINATION OF ALL WORKS AND SHALL TAKE SITE MEASUREMENTS PRIOR TO THE PREPARATION OF ANY SHOP DRAWINGS OR BEFORE COMMENCING FABRICATION.
4. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
5. FOUNDATION MATERIAL SHALL BE APPROVED PRIOR TO POURING CONCRETE FOR A MINIMUM BEARING CAPACITY OF 100kPa, UNLESS NOTED OTHERWISE.
6. ALL DETAILS SHOWN ARE FOR STRUCTURAL PURPOSES ONLY. THE ARCHITECT AND BUILDER MUST ENSURE ALL CONSTRUCTION REQUIREMENTS SET BY BCA (NCC) ARE MET.

CODES OF PRACTICE:

WHERE APPLICABLE, ALL STANDARDS FOR LOADINGS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CODES OF PRACTICE BELOW AND SPECIFIED IN THE BCA (NCC) APPROVED DOCUMENTS:
A) LOADING TO AS/NZS 1170.0:2002, AS/NZS 1170.1:2002, AS/NZS 1170.2:2011
B) STRUCTURAL CONCRETE TO AS 3600:2018
C) STRUCTURAL STEEL TO AS 4100:1998
D) STRUCTURAL TIMBER TO AS 1720:2010

STRUCTURAL STEELWORK:

1. QUALITY OF STRUCTURAL STEEL AND ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS 4100:1998.
2. ALL WELDING SHALL BE IN ACCORDANCE WITH AS 1554 WELDING CODE AND SHALL ONLY BE PERFORMED BY AN EXPERIENCED OPERATOR.
3. ALL BOLTS SHALL BE GRADE 8.8 HIGH STRENGTH BOLTS AND TIGHTENED TO A SNUG FIT, UNLESS NOTED OTHERWISE.
4. ALL STAINLESS STEEL SHALL BE OF GRADE SS 304, UNLESS NOTED OTHERWISE.

STRUCTURAL TIMBER:

1. ALL TIMBER SHALL BE THE BEST QUALITY OF THE SPECIES AND GRADES SPECIFIED, AND SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS. STRUCTURAL TIMBER SHALL COMPLY WITH AS 1720.1.
2. TIMBER SHALL BE STRAIGHT, SOUND, WELL SEASONED, FREE FROM SIGNIFICANT DEFECTS INCLUDING WHITE ANT, BORER, SAP, LOOSE KNOTS, WARP, TWIST, FRACTURES, AND HOLES.
3. TIMBER IN CONTACT WITH GROUND TO BE DURABILITY CLASS 1 AS DEFINED IN AS 1684 APPENDIX A.
4. ALL EXPOSED TIMBERS OR MEMBERS IN POORLY VENTILATED AREAS TO BE DURABILITY CLASS 2 AS DEFINED IN AS1684 APPENDIX A.
5. ALL DIMENSIONS SHOWN ARE MINIMUM REQUIREMENTS FOR STRUCTURAL DESIGN AND SHALL BE VERIFIED WITH MANUFACTURER. MINOR MEMBERS AND MEMBER PROTRUSIONS THAT DO NOT AFFECT THE STRENGTH OF THE STRUCTURE ARE NOT SHOWN FOR CLARITY. THE ENGINEER SHALL BE INFORMED OF ANY DISCREPANCY.
6. REFER TO MANUFACTURER'S DETAILS FOR EXACT MEMBER SIZES, CONNECTION DETAILS, AND SETTING OUT REQUIREMENTS.

STRUCTURAL CONCRETE

1. ALL CONCRETE WORKMANSHIP SHALL BE IN ACCORDANCE WITH SAA CONCRETE STRUCTURES CODE AS 3600:2001.
2. MINIMUM CONCRETE GRADE FOR ALL STRUCTURES SHALL BE GRADE 25MPa, UNLESS NOTED OTHERWISE.
3. CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH AND MUST NOT BE REDUCED OR MEMBERS PENETRATED IN ANY WAY WITHOUT THE ENGINEER'S APPROVAL.

DESIGN LOADINGS:	
SUPERIMPOSED DEAD LOAD	0.5 kPa
LIVE LOAD	0.25 kPa
WIND LOAD (DESIGN WIND SPEED)	41 m/s

SUBMISSION DRAWING

REV	DESCRIPTION	DATE	APPD
A	SUBMISSION DRAWING	20/03/2023	AN

PROJECT TITLE :
PROPOSED MIMOSA OUTDOOR TIMBER GAZEBO
4.27M x 3.69M x 3.23M (H)

CLIENT:
EDCO International AUS PTY LTD
OFFICE 4 / LEVEL 3, 28 MAIN STREET
MORNINGTON, VIC 3931

STRUCTURAL ENGINEERING CONSULTANT :
AJN Consulting Engineers
Tel. +61 4 2434 1405
E-mail: angelo.nogoy@gmail.com

DRAWN BY:	JN	DATE:	MAR 2023
DESIGNED BY:	AN	SCALE:	AS SHOWN
APPROVED BY:	AN		

DRAWING TITLE:
GAZEBO
PLANS, ELEVATION, AND DETAILS

DRAWING NO.
AJN-2023-008-S01

STATUS: P [X] S T C A