

Our Ref: R420200091\_Lt1v1

Contact: Michael Koi



31 July 2020

Bernlodge Pty Ltd  
288 Toonba Road  
SPRINGSURE QLD 4722

Attention: Mr Michael Wagner

Dear Michael

### **ROCKHAMPTON REGIONAL COUNCIL**

#### **APPROVED PLANS**

These plans are approved subject to the current conditions of approval associated with

**Development Permit No.: D/80-2020**

**Dated: 19 August 2020**

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## **312 BOWLIN ROAD – REVIEW OF PROPOSED SHED DESIGN AND HYDRAULIC CERTIFICATION**

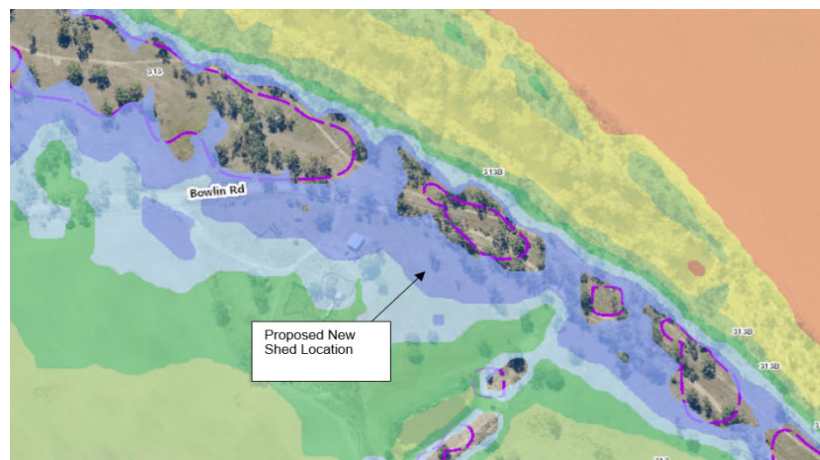
### **1.0 Introduction**

Cardno is commissioned to carry out review and certification of a new shed proposed to be constructed within the property addressed at 312 Bowlin Road in Port Curtis (Lot 1 on RP601487), approximately 250m away from the Fitzroy River. The size of the new shed is 31.5m x 18m with the base slab proposed to match the existing ground levels. Hence, no filling is proposed as part of the new shed construction. The new shed is proposed to be located approximately 60m away and south-east of the existing shed location within the property. The two 18m sides of the new shed are proposed to be permanently open. The walls on the 31.5m sides will be at least 100mm above the ground (i.e. 100mm of openings from the ground along the 31.5m sides). The proposed design drawings of the new shed are attached to the back of this letter. It is understood that no hazardous materials will be stored in the new shed.

This certification letter is to confirm that the proposed new shed meets the requisite acceptable outcomes of Council's Flood Hazard Overlay Code, in particular compliance with AO2.2 of the Flood Hazard Overlay Code was assessed.

### **2.0 Assessment**

Assessment of Council's online flood mapping show that the proposed new shed is located within the H1 (low hazard) and H2 (medium hazard) areas. Figure below shows the approximate location of the proposed new shed and flood hazard zones of the area (i.e. extract from Council's online flood hazard mapping system).



According to Council's SC6.10 Flood Hazard Planning Scheme Policy, a H1 hazard classification area is area with the following flooding characteristics threshold:

- $DxV$  value  $\leq 0.3\text{m}^2/\text{s}$ ;
- Water depth  $\leq 0.3\text{m}$ ; and,
- Flow velocity  $\leq 2\text{m/s}$ .

On the other hand, a H2 hazard classification area is area with the following flooding characteristics threshold:

- $DxV$  value  $\leq 0.6\text{m}^2/\text{s}$ ;
- Water depth  $\leq 0.5\text{m}$ ; and,
- Flow velocity  $\leq 2\text{m/s}$ .

Based on the above, it is anticipated that flooding at the proposed new shed area will be associated with shallow flood depth and slow-moving floodwater (i.e. most likely flooding due to backwater from the Fitzroy River). Given that the proposed new shed will have two sides being permanently opened and a 100mm gap along the permanent wall sides, floodwater can move and fill up the new shed area quite freely. Although a slight increase in flood level in the vicinity of the proposed new shed is possible (because of materials contained within the shed, etc.), the low flow velocity, the small footprint in comparison with the floodplain width, and the fact that the new shed is at least 50m away from its nearest property boundary means it is unlikely that the slight increase in flood level will propagate beyond the property boundary. Further, no additional filling is proposed and the loss of flood storage is mainly due to the shed structures, hence it can be considered that the proposed new shed will not result in a material increase in flood level or flood hazard to the surrounding properties.

### 3.0 Certification

Based on the above assessment, I, Saul Martinez, of Cardno (Consulting Engineers), being duly authorised in this behalf, are of the opinion that the new shed proposed at 312 Bowlin Road in Port Curtis will not result in a material increase in flood level or flood hazard to the immediate surrounding properties. Hence, the proposed new shed is considered to comply with AO2.2 of the Flood Hazard Overlay Code.

### 4.0 Qualifications and Limitations

This certification has been prepared by Cardno (QLD) for the purpose of addressing compliance with Council's Flood Hazard Overlay Code for the proposed new shed at 312 Bowlin Road in Port Curtis. As such, its application is limited and any third parties wishing to use or reference this assessment should seek advice from Cardno as to its applicability. In preparing this certification I relied upon the data and information on Council's online planning scheme and associated mapping system, and hence accuracy of the certification is predicated on the accuracy of these information.

I trust the above provides sufficient information for your purposes. If additional information is required please do not hesitate to contact the undersigned or Michael Koi on 07-3100 2216.

Yours sincerely

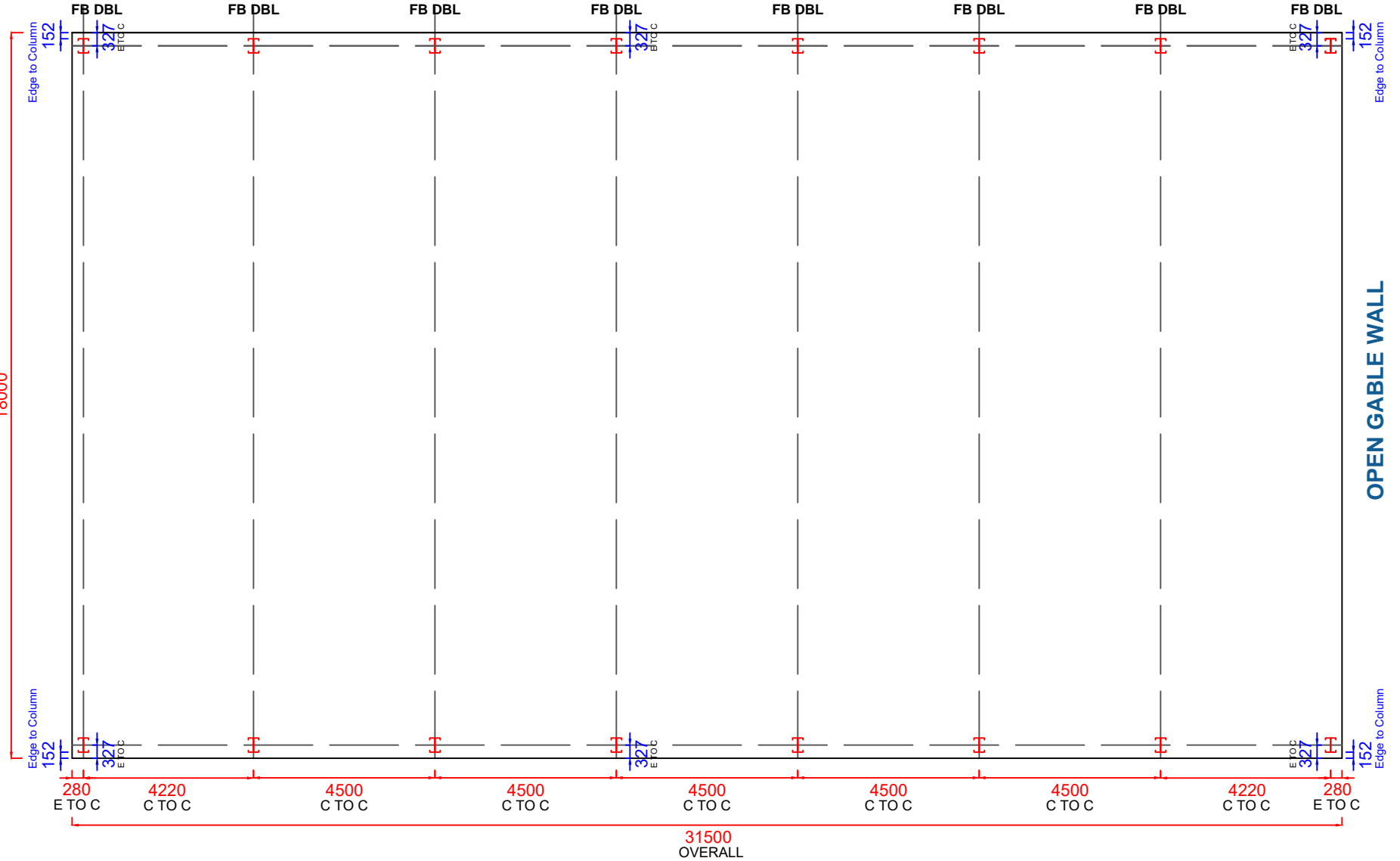


**Saul Martinez (RPEQ 07137)**  
**Business Development Leader – Water and Environment**  
**for Cardno**

**Enclosed:**  
Proposed New Shed Design Drawings

# OPEN GABLE WALL

OVERALL  
18000



## SHEETED SIDE WALL

### NOTE:

E to C

- = Edge of Slab to Centre of FB.
- = Edge of Slab to Centre of Pier.

C to C

- = Centre of FB to Centre of FB.
- = Centre of Pier to Centre of Pier.

152mm = Edge of Slab to Column for all Columns.  
Pier & Foundation Details: See Engineering.

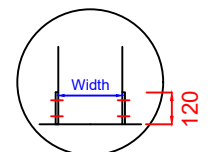
### FB HEIGHT

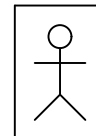
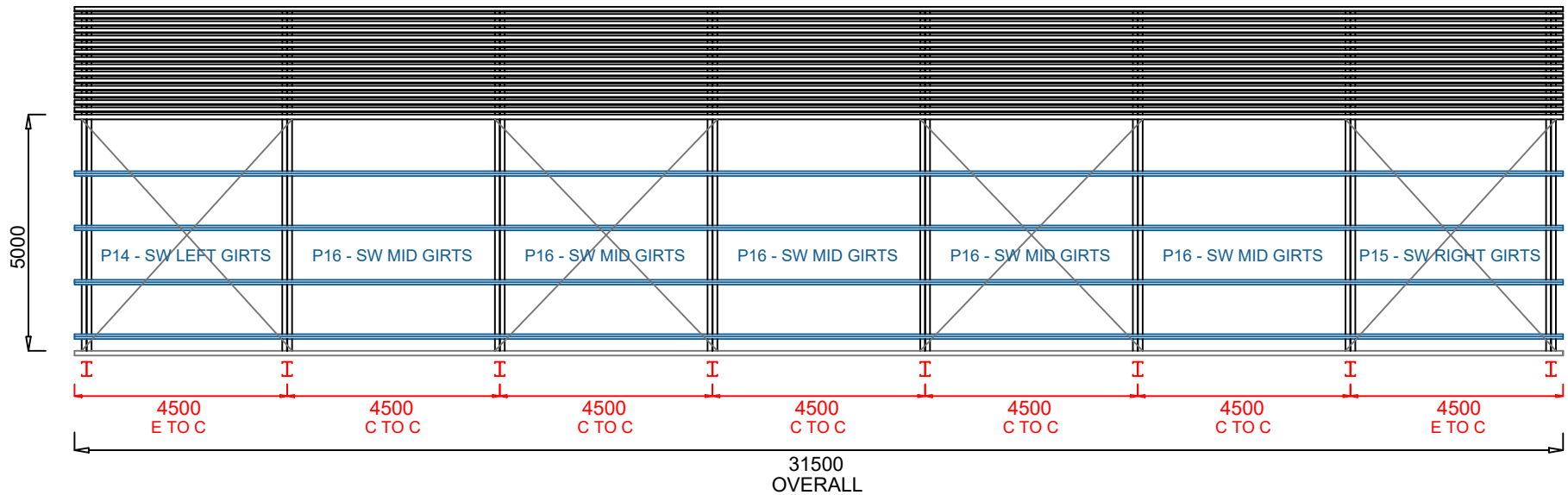
= 120mm Above Concrete.

### FB WIDTH:

Ensure FB Internal Width = Column Width.

**NOTE:** Columns must sit directly on the Concrete.





STANDING OUTSIDE

**IMPORTANT NOTES:**

**E TO C** = EDGE OF SLAB TO CENTER OF COLUMN.

**C TO C** = CENTER OF COLUMN TO CENTER OF COLUMN.

**C TO E** = CENTER OF COLUMN TO EDGE OF SLAB.

**CROSS:** INDICATES BAYS TO BE BRACED (STRAP BRACING 35 X 1.0MM).

**STRAP BRACING:** TO BE FASTENED TO THE OUTSIDE FLANGES OF THE DBL COLUMN AT EACH END WITH 6 #12 X 20 TEK SCREWS.

**STRAP BRACING:** TO BE FASTENED TO THE INSIDE FLANGE OF EACH WALL GIRT WITH 1 #12 X 20 TEK SCREW.

**BRIDGING:** ONE TO THE CENTER OF EACH SIDE WALL BAY (TOPHAT 40MM).

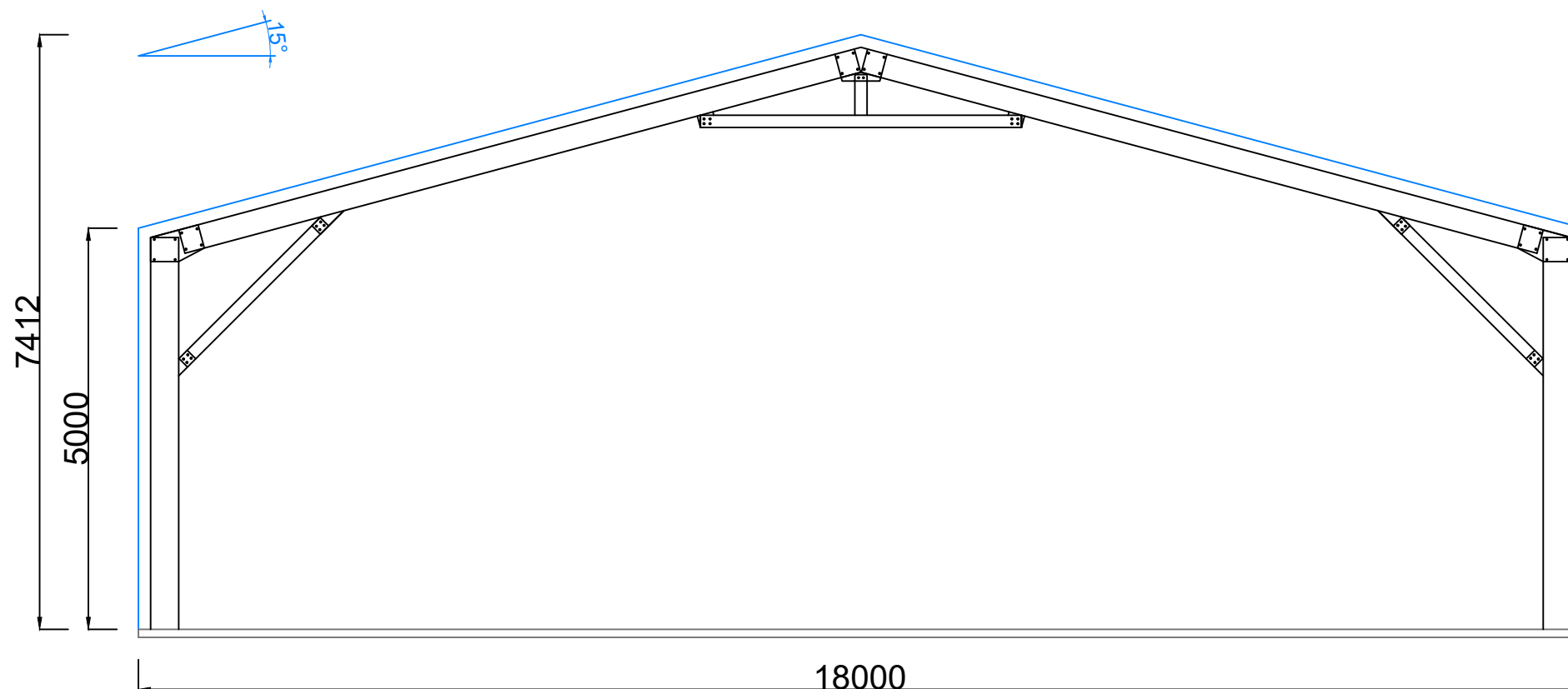
**BRIDGING:** TO BE FASTENED TO THE INSIDE FLANGE OF EACH WALL GIRT WITH 2 #12 X 20 TEK SCREWS.

**CQ SHEDS**

Built Cyclone Tough

SIDE WALL 1 & 2 - ELEVATION

JOB: 312 BOWLIN ROAD  
PORT CURTIS  
QLD 4700



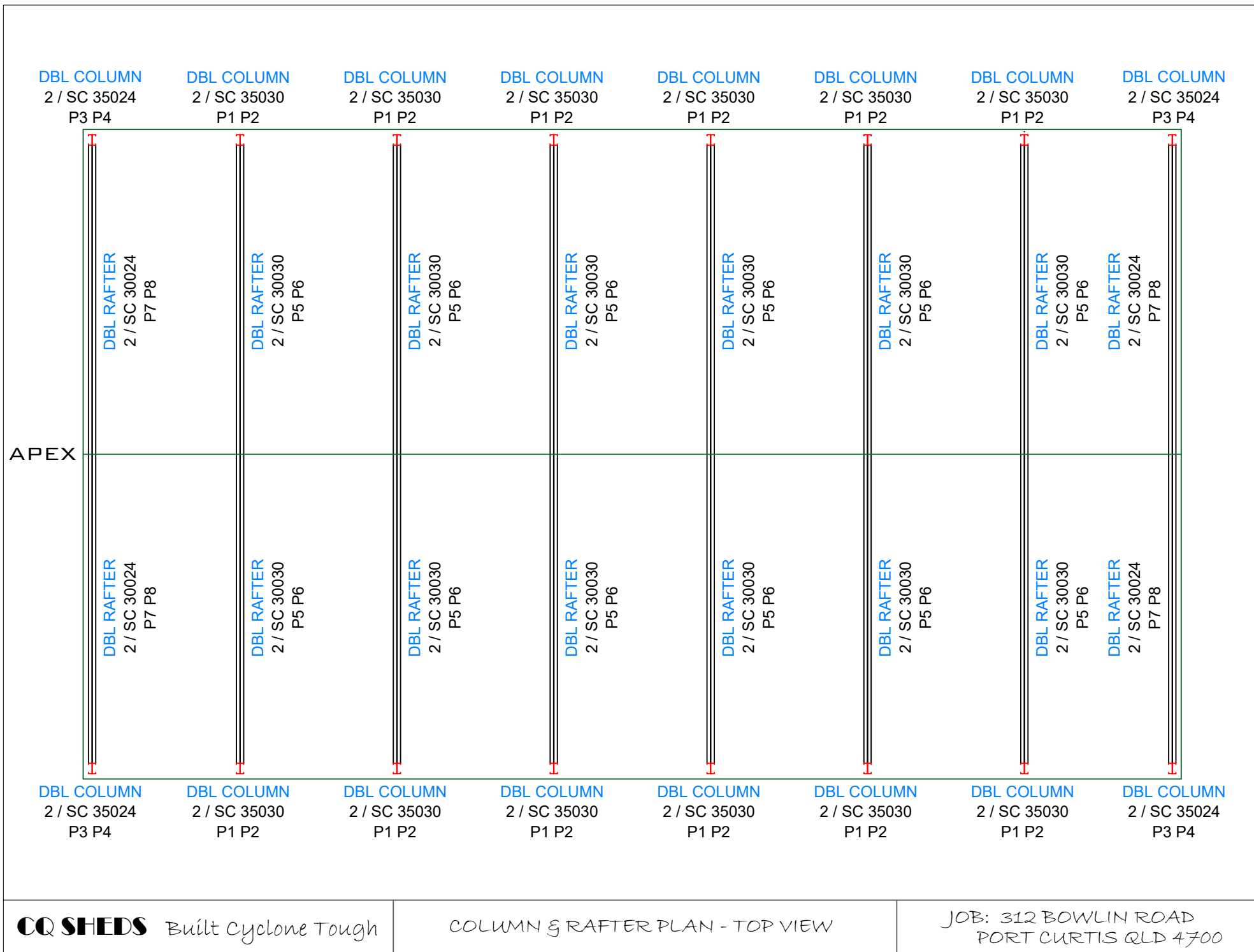
**CQ SHEDS**

Built Cyclone Tough

OPEN GABLE WALL 1 & 2  
ELEVATION

JOB:

312 BOWLIN ROAD  
PORT CURTIS  
QLD 4700





**Figures 2 -3** provide an aerial overview of the site and inset highlighting to proposed location for the Farm Shed with the context of the site.



**Figure 2: Location Plan** (Source: Nearmaps)



**Figure 3: Figure 2 Inset – Farm Shed site location** (Source: Nearmap)

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