

date

11.04.2023

reference

41324-SL01\_B

receiver

Curt Oppegaard &  
Janet Donovan  
C/-Cameron  
Anderson Architects  
5 Lovejoy Street  
Mudgee NSW 2850

Dear Curt and Janet,

## **RE: Inspection and Adequacy Letter for Conversion of Class 7b Shed to Class 1 Dwelling 521 Ulan Road Eurunderee NSW 2850**

I hereby certify that Mr. Luke Morris, a registered Structural Engineer, attended the site at the above address on Friday 24<sup>th</sup> March 2023. The purpose of the inspection was to inspect and review existing structural plans for the shed to determine if its Building Code of Australia (BCA) classification could be changed from Class 7b (shed) to Class 1 (dwelling).

The shed is a 9m wide x 18m long with 4 bays at 4.5m cts. It has a steel trussed roof with steel sheet roof cladding. The columns are 75x4.0SHS with a 4m eave height and 25mmØ rod haunch brace. The columns are founded on a 500mm sq. x 600mm deep concrete footing with a 200mm sq. x 12mm base plate. There is a 100mm thick minimum topping slab over with a waterproof membrane.

Documentation provided by the client states that the shed was previously approved by Mudgee Shire Council on 18<sup>th</sup> May 1984, presumable for use as a shed.

The internal fit-out consists of temporary store-rooms, a lounge room and kitchen on the ground floor. There is an upstairs mezzanine supported on 300mm Hy-Joists at 600mm cts with a maximum span of 4.5m with 22mm particle board flooring over.

Photos of the dwelling are shown on the following page. Plans of the existing shed are shown in Appendix A.



Figure 1 – Internal roof trusses and bracing



Figure 2 – Internal roof trusses and bracing



Figure 3 – Internal roof trusses and bracing



Figure 4 – Internal roof trusses and bracing





Figure 5 – Internal stairs



Figure 6 – Fully clad end bay



Figure 7 – Floor joists



Figure 8 – Waterproof membrane

The inspected building matches that shown in the attached drawings (see Appendix A) with additional modifications made for its conversion into a dwelling. The structure has been checked in accordance with accepted engineering principles and has been found to be generally structurally adequate to the below Australian Standards and design parameters.

## 1. Loading:

General principles of loading calculation and loading combinations to Australian Loading Code AS1170.0-2002 and other relevant codes as below:

- a. Dead Loads:
  - i. Roof: Self-weight of steel sheeted roof and purlins, 0.15kPa.
  - ii. Framing: Self-weight of timber and steel framing elements.
- b. Live Loads:
  - i. Roof: Maintenance load of  $1.8/A + 0.12\text{kPa}$  (min 0.25kPa), or 1.4kN point loading as per AS1170.1-2002.
  - ii. Floor: Imposed action for general areas of self-contained dwellings, 1.5kPa distributed action or 1.8kN point loading as per AS1170.1-2011.
- c. Wind Loads: Region A, Terrain category 2,  $M_t = M_s = 1.0$ , Importance level 2 to AS1170.2-2011.

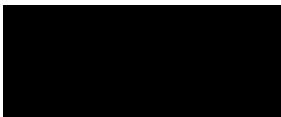
## 2. Design Standards:

- a. AS/NZS 1170.2:2002 – Structural Design Actions, General Principals
- b. AS/NZS 1170.1:2002 – Structural Design Actions, Permanent Imposed and other Actions
- c. AS/NZS 1170.2:2011 – Wind Actions
- d. AS 4100:2020 – Steel Structures
- e. AS/NZS 4600:2018 – Cold-formed Steel Structures
- f. AS 2870:2011 – Residential slabs & footings, construction
- g. AS 1684.2:2010 – Residential Timber Framed Construction

Upon analysis, we advise the identified elements of the shed structure and fit-out comply with the above standards as is suitable for use as a habitable structure. If you have any further enquiries regarding this matter, please contact the undersigned.

Yours faithfully

BARNSON PTY LTD

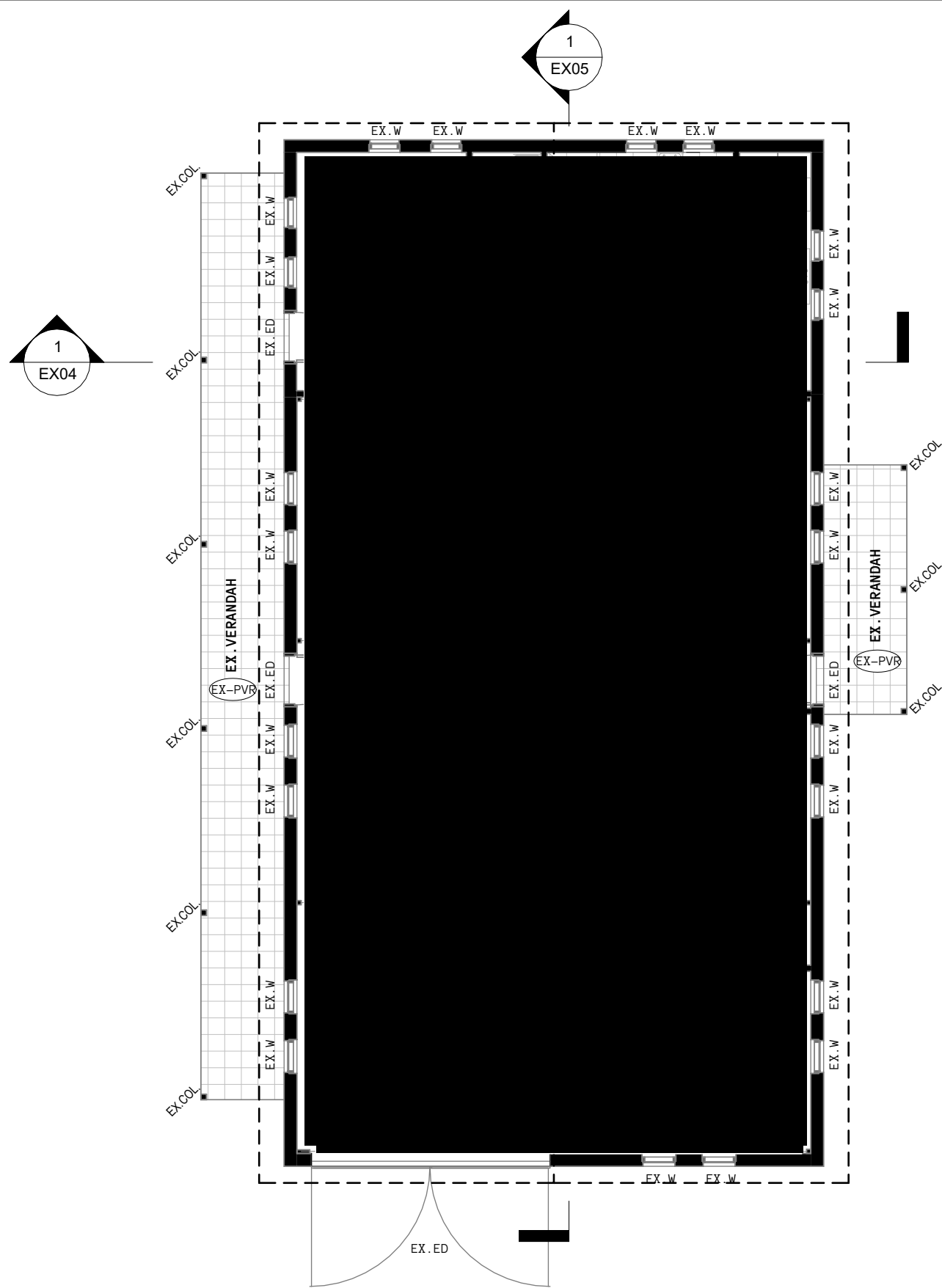


Luke Morris  
BE MIEAust CPEng (Reg)  
Director

*Enclosed:*

*Appendix A – Existing plans (by Cameron Anderson Architects).*

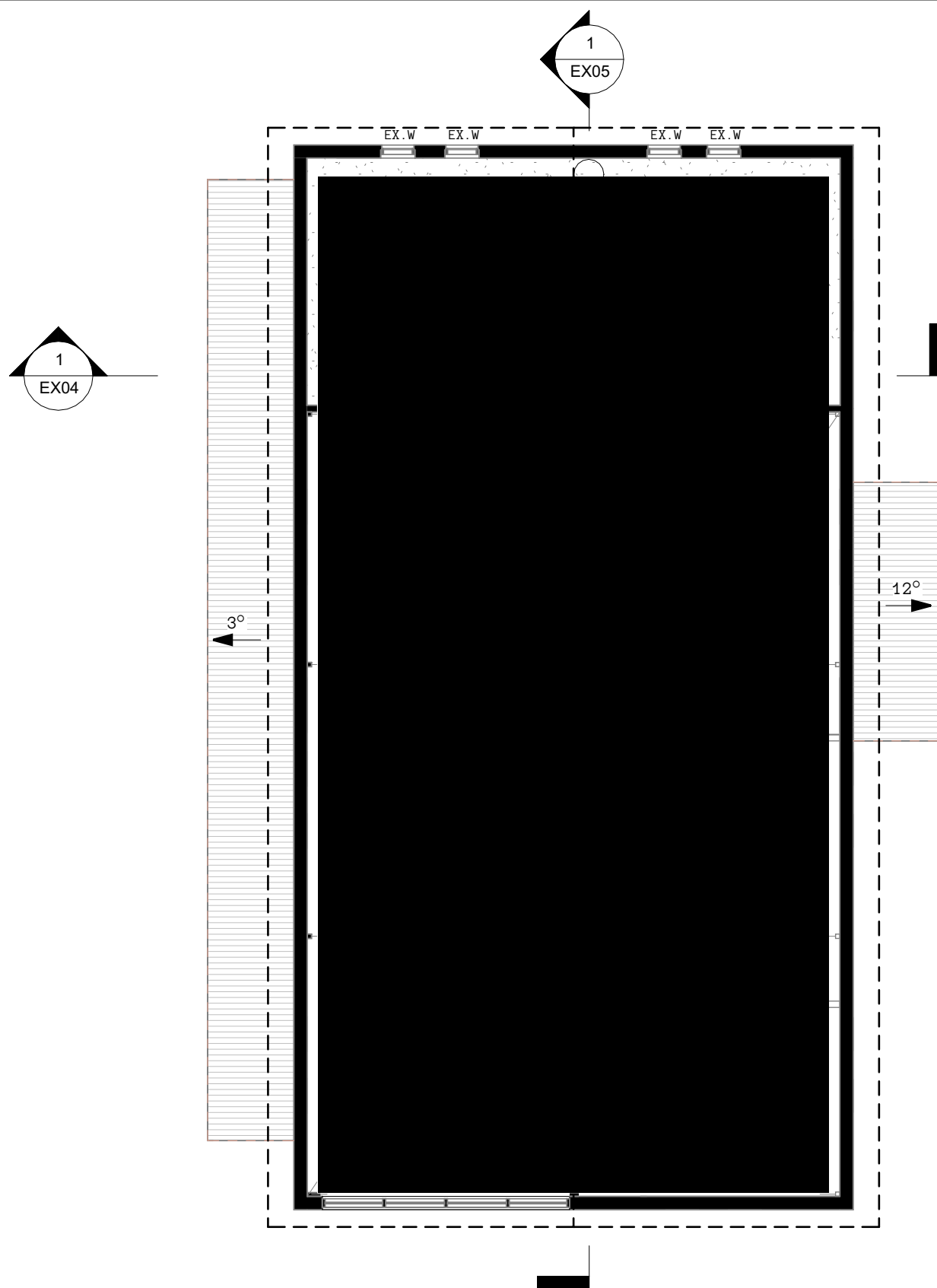
**Appendix A –  
Existing plans (by Cameron Anderson Architects)**



1  
EX02

EXISTING SHED GROUND FLOOR PLAN

1 : 100



2  
EX02

EXISTING SHED MEZZANINE FLOOR PLAN

1 : 100

NOTES: SMOKE ALARMS

(S) EXISTING INTERCONNECTED SMOKE DETECTORS TO COMPLY WITH AUS. STDS & NCC C1. 2.3.2

PRELIMINARY



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NSW Nominated Architect | Cameron Anderson NSW 8560

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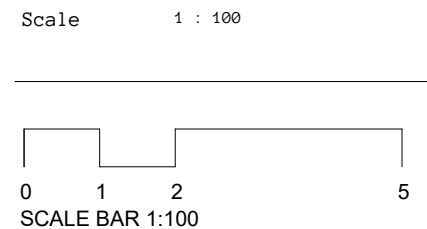
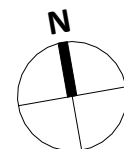
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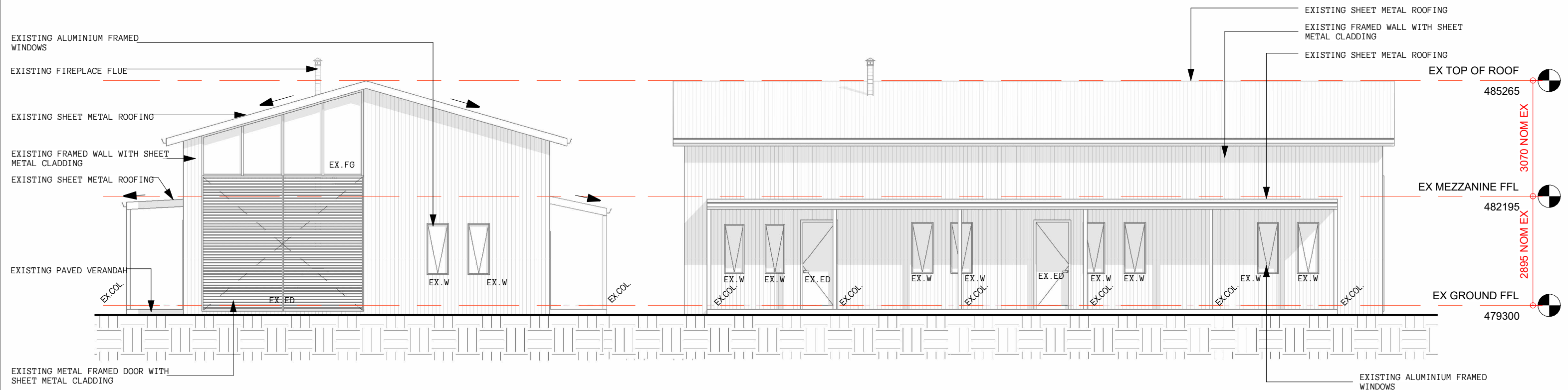
Rev	Description	Date
01	PRELIM EX SHED DRAWINGS	17.02.2023
02	EX SHED DRAWINGS	30.03.2023



ULAN ROAD DWELLING  
521 ULAN RD, EURUNDEREE NSW 2850  
LOT 2 / DP 618062

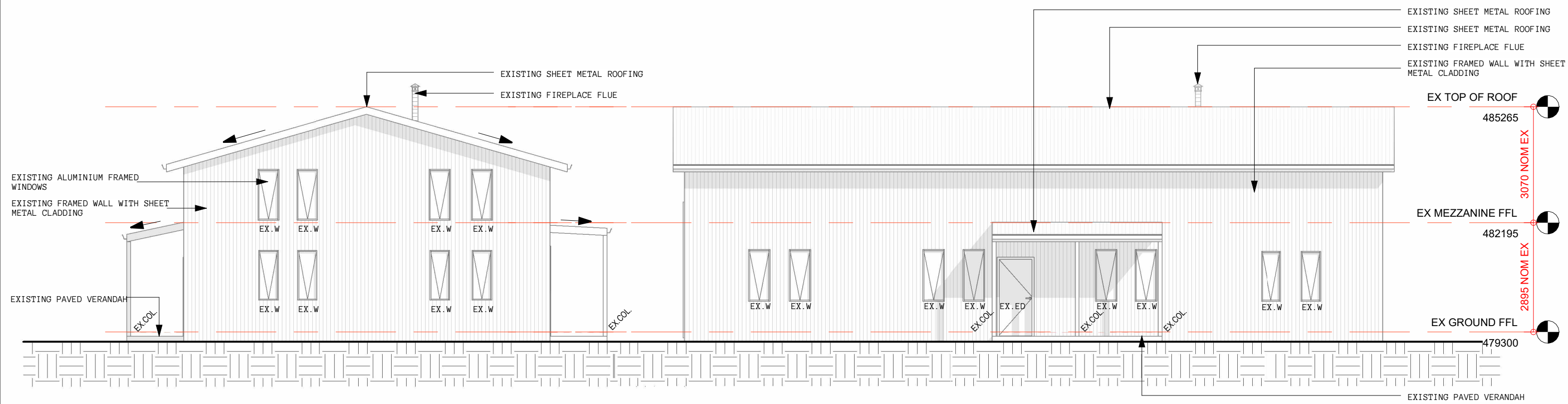
EXISTING SHED FLOOR PLANS

Project No.	Status	Drawing No.	Revision
448	DA	EX02	02



1  
EX03  
EXISTING SHED ELEVATION SOUTH  
1 : 100

2  
EX03  
EXISTING SHED ELEVATION WEST  
1 : 100



3  
EX03  
EXISTING SHED ELEVATION NORTH  
1 : 100

4  
EX03  
EXISTING SHED ELEVATION EAST  
1 : 100

PRELIMINARY



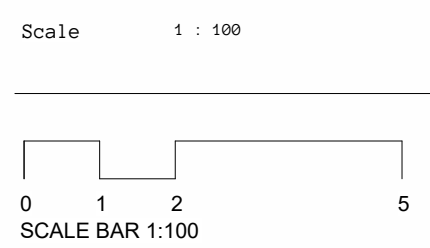
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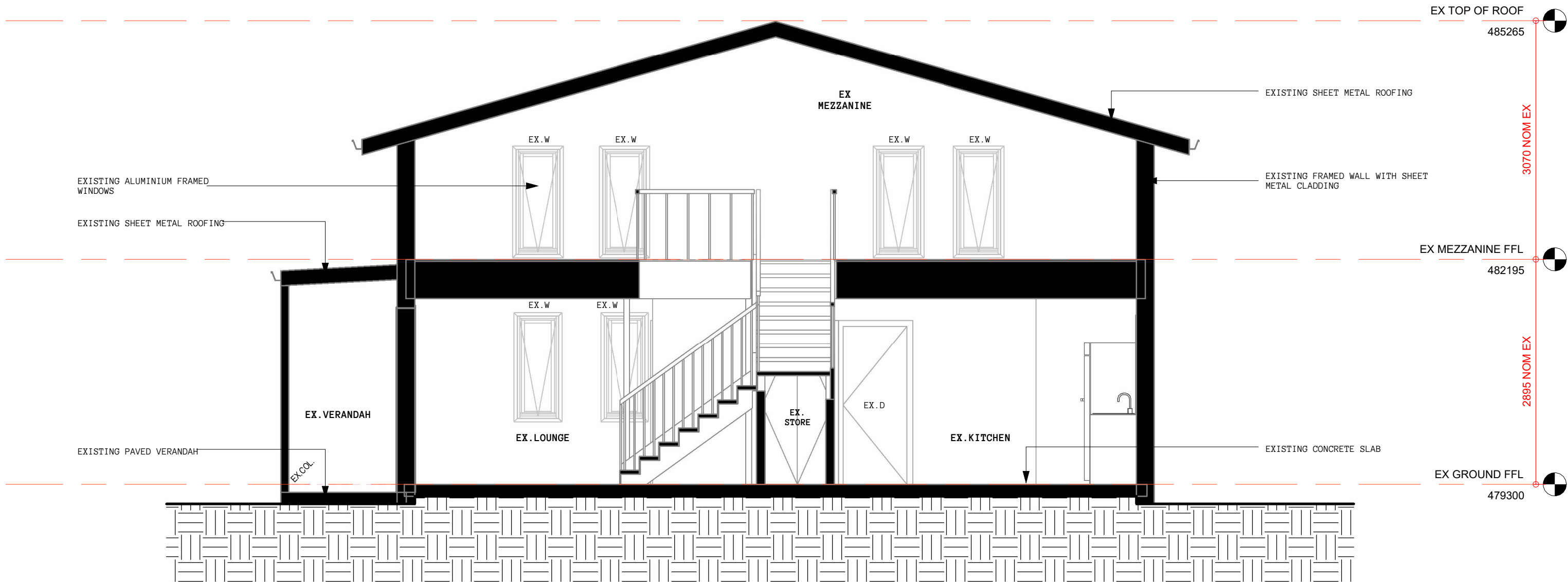


**ULAN ROAD DWELLING**  
521 ULAN RD, EURUNDEREE NSW 2850  
LOT 2 / DP 618062

**EXISTING SHED ELEVATIONS**

Project No.	Status	Drawing No.	Revision
448	DA	EX03	02





1  
EX04

EXISTING SHED SECTION 01

1 : 50

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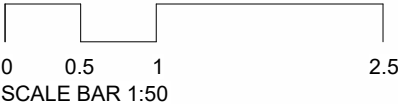
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Scale 1 : 50



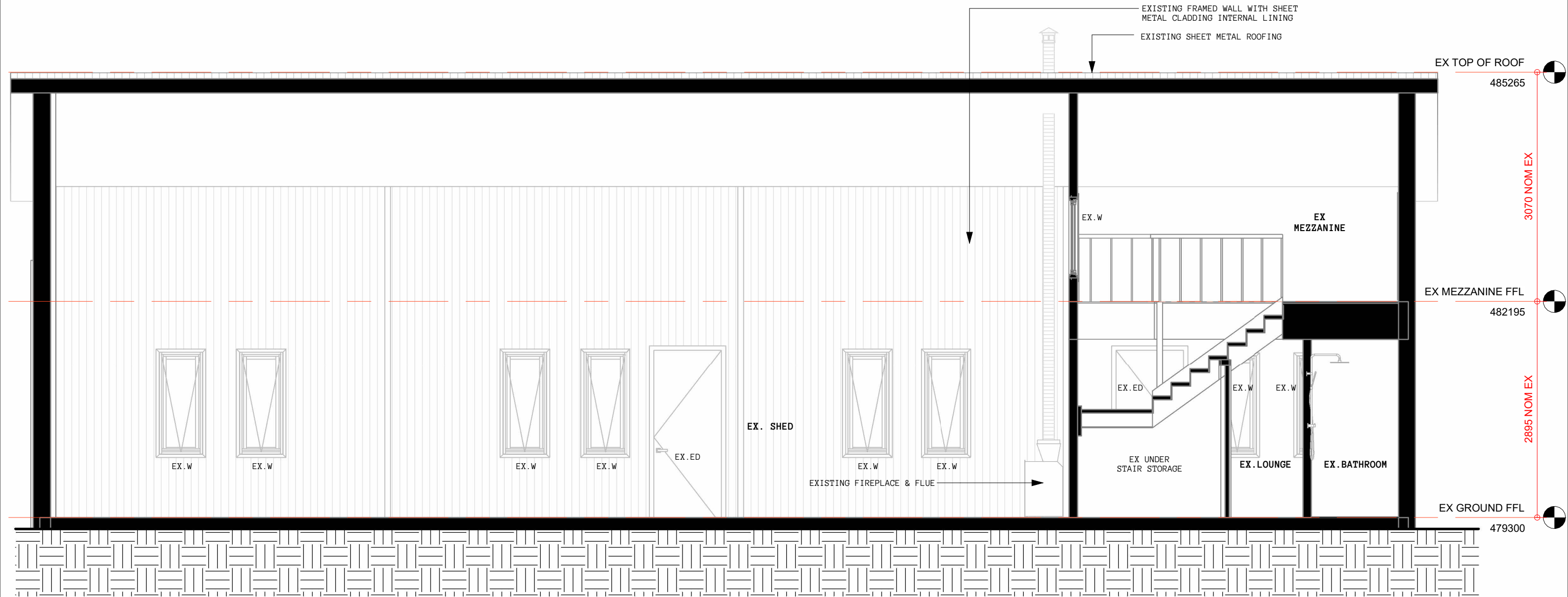
ULAN ROAD DWELLING

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EXISTING SHED SECTION 01

Project No.	Status	Drawing No.	Revision
448	DA	EX04	02





1  
EX05

EXISTING SHED SECTION 02

1 : 50

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