

To: **HI-TECH HOMES**

Attn: **Ali Semerci**

PO Box 56,

BRINGELLY NSW 2556

Our Reference

4829-SL01_A

Hi-Tech Ref. No.

202693

Monday, 22 January 2024

Dear Sir/Madam,

STRUCTURAL DESIGN CERTIFICATION For: Relocatable Dwelling Structural Frames

Re: Hearn

At Lot 2 DP 1014531, 87 Henry Bayly Drive, Mudgee NSW 2850

As requested, we advise that the structural design of relocatable dwelling frames as detailed on the structural drawings:

Drawing set	Date	Prepared by
4829-S00-S08_A	22.01.2024	Halina Engineers

is structurally adequate to BCA 2022 Volume 2, Part B1 for the below design parameters:

1) Loadings:

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

a) Dead Load

i) Roof: Self-weight of roof structure, ceiling and roof sheeting (max. 0.3kPa)

ii) Wall: Stud wall frames: 0.5kPa.

iii) Floor: Self-weight of steelwork and floor finishes (max. 0.75kPa)

b) Live Load

i) Roof: Maintenance live load: 0.25kPa – residential.

ii) Internal and external floor: 1.5kPa – residential live load as per AS1170.1-2002.

c) Wind Load

i) Region A, importance level 2, terrain category 2.5, topographic class T0 to AS1170.2-2021 or wind classification N2 to AS4055-2021.

2) Steelworks:

- a) Cold-formed Sections: Floor frame joists and bearers grade 350 to AS4600-2018
- b) Design for Durability:
- c) Design for Durability:
 - i) Atmospheric Corrosivity Zones C2 to AS4312-2008.
 - i) Cold-formed steelwork: Cold-formed steelwork: In accordance with B2.3 Protection Provisions within “NASH Standard – Residential & Low-rise Steel Framing Part 2: Design Solutions 2014” and Protection requirement within “Best Practice for ABCB Housing Provisions”.
 - ii) Screws: Class 3 to AS3566-2002.
 - iii) Bolts: HDG to AS1214-1998

3) Footings: Design complies with AS2870-2011.

- d) Pad sizes and depths: as shown on the mentioned structural drawings.
- e) Assumed soil classification “M” to AS2870-2011 with minimum design bearing capacity of 150kPa. Site classification to be confirmed by a classifier as per Appendix A – AS2870-2011 prior to construction.
- f) Sub-floor and perimeter drainage: designed by others.

4) Serviceability: Design complies with the below mentioned NASH deflection criteria:

- a) Floor and roof under dead load: Deflection < Span/500.
- b) Floor and roof under live load: Deflection < Span/250
- c) Floor joist under 1.0kN point load at the middle span <2.0mm for vibration control.
- d) Wall frame under wind load: Deflection < Span/200 or max. 20mm.

5) Fabrication/ Erection:

- a) Complies with the current Australian Codes and Hi-Tech standard specifications.

6) Transportation Notes:

- a) The dwelling frame is structurally adequate to be transported to the site. The maximum speed for transportation to be 80km/h.
- b) Methodology of transportation, lifting and installations by crane on site by others.

If you have any further enquiries regarding this matter, please do not hesitate to contact the undersigned.

HALINA ENGINEERS PTY LTD

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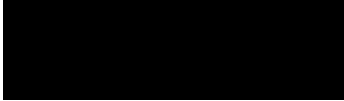
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Yours faithfully

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Principal Structural Engineer/Director

Enclosed: Structural drawings 4829-S00-S08-A