

Thermal Panel Solutions

Structural Assessment of

Therm-Loc EPS Sandwich Panels

File Reference: *Thermalps Therm-Loc Structural Report V1.2_260305*

File Date: *5 March 2026*

Document Version: *1.2*



Contents

1	INTRODUCTION	3
1.1	BCA 2022 COMPLIANCE.....	3
1.2	SCOPE – STRUCTURAL RELIABILITY AND RESISTANCE	3
1.3	THERM-LOC (EPS-FR) SANDWICH PANELS	3
1.4	ASSESSMENT METHOD.....	4
1.5	SUPPORTING INFORMATION	5
1.6	GENERAL.....	5
2	DESIGN CONSIDERATIONS.....	6
2.1	INTERNAL WIND PRESSURES.....	6
2.2	BUILDING FRAME / SUB-STRUCTURE	6
2.3	CONSTRUCTION DETAILS.....	6
2.4	DESIGN ASSUMPTIONS.....	6
3	INTERNAL WALL & CEILING STRUCTURAL SPAN TABLES	7
3.1	THERM-LOC 0.6MM SKINS	7
3.2	THERM-LOC 0.5MM SKINS	7
3.3	THERM-LOC 0.4MM SKINS	7
4	EXTERNAL WALL STRUCTURAL SPAN TABLES	8
4.1	THERM-LOC 0.6MM SKINS	8
4.2	THERM-LOC 0.5MM SKINS	9
4.3	THERM-LOC 0.4MM SKINS	10
5	CONCLUSION.....	11
6	DISCLAIMER	11
7	REPORT AUTHOR.....	11

1 Introduction

The enclosed report is prepared by Clarkson Consulting Services (CCS) and provides an assessment that may be presented as evidence of suitability compliant with the nominated Performance Requirements in accordance with Clause A5G3 (1) (e) of the Building Code of Australia 2022 (BCA 2022).

Additionally, the enclosed report comprises supporting documentation to satisfy the nominated Performance Requirements and is prepared in accordance with Clause A2G2 (2) (c) of BCA 2022 (Volumes 1 and 2).

The enclosed Structural assessment has been prepared for the Thermal Panel Solutions Therm-Loc EPS Sandwich Panels as outlined in the Thermal Panel Solutions Technical Manual R3.1. This report provides a Structural assessment of the Sandwich Panels only, structural assessment of any supporting structures is excluded from this report.

1.1 BCA 2022 Compliance

The enclosed Structural certification may be used to support demonstration of compliance for the nominated Thermal Panel Solutions Therm-Loc Sandwich Panels to comply with B1P1 (1), (2)(a)(b)(c) of BCA 2022 Volume 1 and H1P1 (1), (2)(a)(b)(c) & (3) of BCA 2022 Volume 2.

The supporting information for this report includes evidence of structural resistance to actions by structural testing, engineering calculations, design documentation and installation instructions for the Therm-Loc Sandwich Panels.

1.2 Scope – Structural Reliability and Resistance

This report demonstrates Structural compliance with B1P1 (1), (2)(a)(b)(c) of BCA 2022 Volume 1 and H1P1 (1), (2)(a)(b)(c) & (3) of BCA 2022 Volume 2, for the Therm-Loc Sandwich Panels.

Therm-Loc Sandwich Panels may be specified as External walls, Internal walls or Ceiling Panels and shall be subject to assessment of site and project specific external or internal wind pressures in accordance with AS 4055:2021 “Wind Loads for Housing” or AS/NZS 1170.2:2021 “Structural Design Actions – Part 2: Wind Actions”.

1.3 Therm-Loc (EPS-FR) Sandwich Panels

Therm-Loc Sandwich Panels are manufactured with Fire Retardant, SL grade Expanded Polystyrene (EPS-FR) with G300 grade sheet steel skins. Panels are manufactured in a range of panel thicknesses and steel skin thicknesses as detailed in the table below. Therm-Loc Sandwich Panels are installed as single or multiple spanning panels whereby the panels are installed between lateral supports at or near each end of the panel, lateral supports are generally the main building structure.

 <small>FIRE RETARDANT EPS PANELS BY THERMAL PANEL SOLUTIONS</small>		
Steel Skins	Panel Core	Panel Thickness (mm)
		50
		75
	EPS-FR – SL Grade	100
	Nom Density = 13.5 kg/m ³	125
	Thermal “k” (at 23°C)	150
	= 0.0442 (W/m.K)	200
0.4 mm G300 Steel Skins		250
0.5 mm G300 Steel Skins		
0.6 mm G300 Steel Skins		

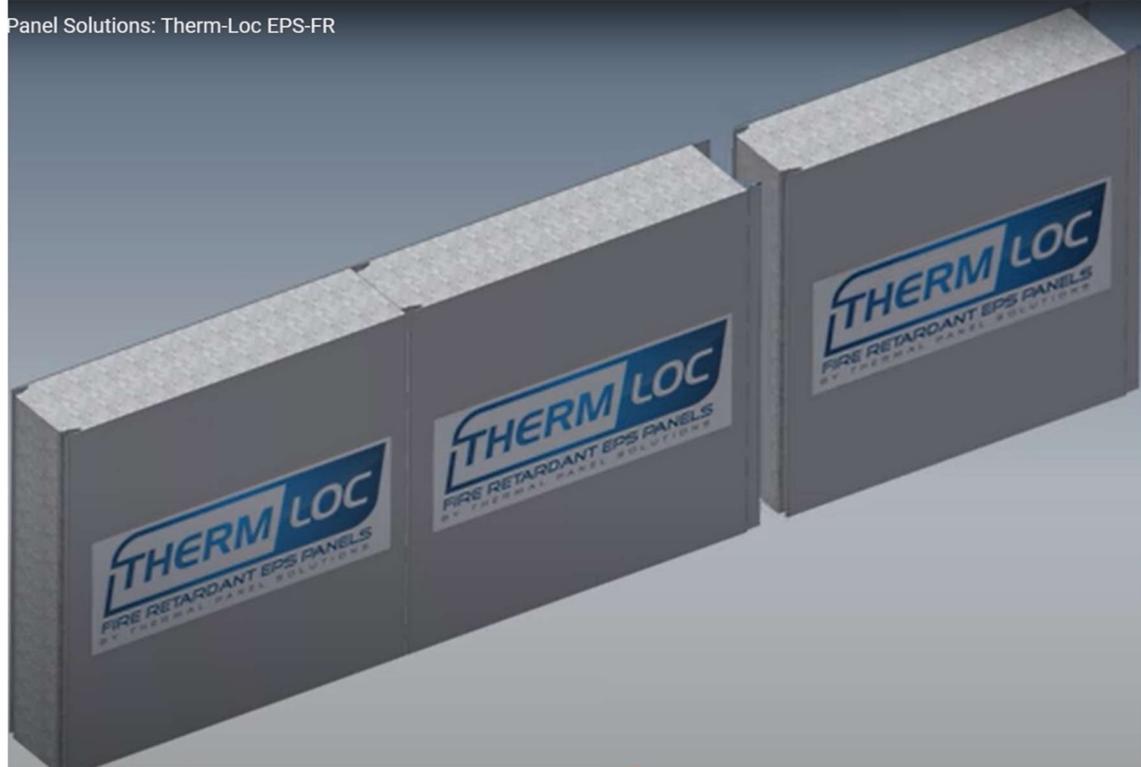


Figure 1 Therm-Loc EPS-FR Panels

Building structures shall be designed to provide structural support for the Therm-Loc Sandwich Panels.

The skin and core components of Therm-Loc Sandwich Panels have the following structural properties:

Property	Symbol	Values
Steel Skins		
Yield Stress	δ_y	300 MPa
Youngs Modulus	E_f	210 GPa
Skin Thickness	T	0.4mm, 0.5mm, 0.6mm
EPS-FR Core		
Youngs Modulus	E_c	2,200 kPa
Shear Modulus	G_c	1,918 kPa
Compressive Strength	σ_c	70 kPa
Shear Strength	τ_c	69 kPa

1.4 Assessment Method

This report addresses the Structural compliance of the Therm-Loc Sandwich Panels in accordance with A2G2 of BCA 2022 (Volumes 1 & 2). This report has been prepared such that it may be presented as evidence of suitability compliant with the nominated Performance Requirements in accordance with BCA 2022 – A5G3 (1) (e).

This report demonstrates the Therm-Loc Sandwich Panels are compliant (by comparison with DtS solution) with B1P1 (1), (2)(a)(b)(c) of BCA 2022 Volume 1 and H1P1 (1), (2)(a)(b)(c) & (3) of BCA 2022 Volume 2.

1.5 Supporting Information

The supporting information for this report includes design documentation and installation instructions plus structural analysis of the Therm-Loc Sandwich Panels.

The enclosed Structural assessment is based on:

- Thermal Panel Solutions – Technical Manual R3.1
- AS/NZS 1170.0-2002 “Structural design actions – Part 0: General Principles”
- AS/NZS 1170.1-2002 “Structural design actions – Part 1: Permanent, imposed and other actions”
- AS/NZS 1170.2-2021 “Structural design actions – Part 2: Wind actions”
- AS 4055-2021 “Wind loads for housing”
- AS 1366.2-1992 “Rigid cellular plastics sheets for thermal insulation Rigid cellular polyisocyanurate”
- AS 1366.3-1992 “Rigid cellular plastics sheets for thermal insulation Rigid cellular polystyrene”
- AS/NZS 4600-2018 “Cold formed steel structures”

1.6 General

The enclosed structural assessment provides guidance for the structural performance of the Therm-Loc Sandwich Panels for the nominated loading conditions.

Where construction differs from the system descriptions, the structural performance of the wall system may vary.

2 Design Considerations

2.1 Internal Wind Pressures

The nominated wind pressures for each project shall be derived from either AS/NZS 1170.2-2021 “Structural design actions – Part 2: Wind actions” or AS 4055:2021 “Wind loads for housing”.

For convenience, any Wind Classifications referenced in this report are based upon the Wind Classifications as detailed in AS 4055:2021.

2.2 Building Frame / Sub-Structure

The building structure must be suitably designed by an engineer to withstand expected external and/or internal wind pressures and shall be designed to provide suitable support to the Therm-Loc Sandwich Panels. Under Serviceability Limit State (SLS) conditions the expected maximum deflection of the building frames shall be limited to $L/250$.

2.3 Construction Details

Standard construction details for the Therm-Loc Sandwich Panels are provided in the Thermal Panel Solutions Construction Details manual Rev 0.

2.4 Design Assumptions

In addition to the product properties detailed in Section 1 of this report, the following assumptions form the basis of the enclosed Structural Design Span Tables for Therm-Loc Sandwich Panels.

1. Applied loads on the panels are to be calculated in accordance with AS/NZS1170.0-2002, AS/NZS1170.1-2002, AS1170.2-2011, AS4055-2021 plus all other relevant Australian Standards
2. Panel spans have been calculated for the following loading in accordance with AS/NZS 1170:
 - Self-weight of panels (Ceiling spans only)
 - A distributed service loading of 0.25 kPa (Ceiling spans only)
 - A concentrated service loading of 1.4 kN (Ceiling spans only)
 - An internal differential wind loading of 0.33 kPa (Internal Walls only)
 - External Wind Pressure loading as per External Wall Span Tables – Section 4 (External wall applications defined in AS/NZS1170.2 in non-cyclonic wind regions only)
3. A Serviceability Limit State (SLS) deflection limit of $\text{Span}/150$ has been used for load deflection and thermal bowing
4. In the enclosed span tables, where the maximum span dimensions (in metres) are followed by “(SLS)”, this identifies the Deflection limit of $\text{Span}/150$ is the limiting design factor, otherwise panel skin wrinkling under bending is considered the main design factor
5. Apart from the load conditions listed above, the panel spans have not been checked for snow, earthquake, foot traffic, storage, or other loading
6. Non-Freezer applications assume a maximum temperature difference $\Delta T = 40^{\circ}\text{C}$ across the panel
7. Freezer applications assume a maximum temperature difference $\Delta T = 75^{\circ}\text{C}$ across the panel
8. Panel building bracing and supports are to be provided by structural framing, designed by others
9. Adequate fixings to support structures are to be provided, designed by others
10. Adequate thermal stress relief at supports, panel corners and junctions, connections to structural supports, and other points of restraint, shall be provided, designed by others
11. Adequate pressure relief ports or other ventilation systems designed to equalise differential pressures are to be provided
12. Selection of panel thickness for thermal performance is to be assessed by others
13. Panel configurations outside of the scope of the span tables are to be checked and certified by a qualified structural engineer

3 Internal Wall & Ceiling Structural Span Tables

The enclosed structural span tables and their supporting calculations demonstrate compliance with B1P1 (1), (2)(a)(b)(c) of BCA 2022 Volume 1 and H1P1 (1), (2)(a)(b)(c) & (3) of BCA 2022 Volume 2. The span tables provide the maximum allowable panel spans for internal wall and ceiling applications only.

3.1 Therm-Loc 0.6mm Skins

 FIRE RETARDANT EPS PANELS BY THERMAL PANEL SOLUTIONS	Therm-Loc Panel – 0.6mm thick steel skins bonded to SL grade EPS-FR core		
	Allowable Spans (mm)		
	Internal, Non-Loadbearing Walls		Ceiling Spans
Panel Thickness (mm)	Non-freezer Applications	Freezer Applications	Maintenance Access Only
50	5,560 (SLS)	N/A	4,400 (SLS)
75	7,430 (SLS)	N/A	5,910 (SLS)
100	9,020	N/A	6,820
125	9,660	8,690	7,280
150	10,190	9,170	7,650
200	11,050	9,940	8,250
250	11,740	10,560	8,700

Table 2.1 – Allowable Spans for Therm-Loc 0.6mm

3.2 Therm-Loc 0.5mm Skins

 FIRE RETARDANT EPS PANELS BY THERMAL PANEL SOLUTIONS	Therm-Loc Panel – 0.5mm thick steel skins bonded to SL grade EPS-FR core		
	Allowable Spans (mm)		
	Internal, Non-Loadbearing Walls		Ceiling Spans
Panel Thickness (mm)	Non-freezer Applications	Freezer Applications	Maintenance Access Only
50	5,280 (SLS)	N/A	4,250 (SLS)
75	7,050 (SLS)	N/A	5,600
100	7,950	N/A	6,110
125	8,490	7,640	6,500
150	8,940	8,040	6,830
200	9,680	8,710	7,340
250	10,270	9,240	7,730

Table 2.2 – Allowable Spans for Therm-Loc 0.5mm

3.3 Therm-Loc 0.4mm Skins

 FIRE RETARDANT EPS PANELS BY THERMAL PANEL SOLUTIONS	Therm-Loc Panel – 0.4mm thick steel skins bonded to SL grade EPS-FR core		
	Allowable Spans (mm)		
	Internal, Non-Loadbearing Walls		Ceiling Spans
Panel Thickness (mm)	Non-freezer Applications	Freezer Applications	Maintenance Access Only
50	4,950 (SLS)	N/A	4,060 (SLS)
75	6,230	N/A	4,890
100	6,790	N/A	5,310
125	7,240	6,510	5,640
150	7,610	6,840	5,900
200	8,220	7,390	6,330
250	8,710	7,830	6,670

Table 2.3 – Allowable Spans for Therm-Loc 0.4mm

4 External Wall Structural Span Tables

The enclosed structural span tables and their supporting calculations demonstrate compliance with B1P1 (1), (2)(a)(b)(c) of BCA 2022 Volume 1 and H1P1 (1), (2)(a)(b)(c) & (3) of BCA 2022 Volume 2. The span tables provide the maximum allowable panel spans for External wall applications only.

4.1 Therm-Loc 0.6mm Skins

4.1.1 Ultimate Limit State (ULS) Wind Pressures

		Therm-Loc Panel – 0.6mm thick steel skins bonded to SL grade EPS-FR core													
Panel Thickness (mm)	ULS Wind Pressures (kPa)														
	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
	Maximum Span (mm)														
50	5,750	4,690	4,060	3,630	3,320	3,070	2,870	2,420	2,020	1,730	1,510	1,340	1,210	1,010	860
75	6,660	5,440	4,710	4,210	3,840	3,560	3,330	2,980	2,720	2,520	2,270	2,020	1,810	1,510	1,290
100	7,320	5,980	5,180	4,630	4,230	3,910	3,660	3,270	2,990	2,770	2,590	2,440	2,310	2,020	1,730
125	7,850	6,400	5,550	4,960	4,530	4,190	3,920	3,510	3,200	2,960	2,770	2,610	2,480	2,260	2,090
150	8,280	6,760	5,850	5,230	4,780	4,420	4,140	3,700	3,380	3,130	2,920	2,760	2,610	2,390	2,210
200	8,980	7,330	6,350	5,680	5,180	4,800	4,490	4,010	3,660	3,390	3,170	2,990	2,840	2,590	2,400
250	9,540	7,790	6,740	6,030	5,510	5,100	4,770	4,260	3,890	3,600	3,370	3,180	3,010	2,750	2,550

Table 3.1 – Maximum panel spans for ULS Wind Pressures for Therm-Loc 0.6mm

Note: Green shaded cells above indicate failure mode is predicted to be panel skin wrinkling under bending.
Orange shaded cells above indicate failure mode is predicted to be EPS core shear failure.

4.1.2 Serviceability Limit State (SLS) Wind Pressures

		Therm-Loc Panel – 0.6mm thick steel skins bonded to SL grade EPS-FR core													
Panel Thickness (mm)	SLS Wind Pressures (kPa) for Max Deflection of Span/150														
	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
	Maximum Span (mm)														
50	4,600	3,750	3,200	2,810	2,500	2,250	2,050	1,740	1,500	1,320	1,180	1,060	970	820	710
75	6,190	5,100	4,390	3,880	3,480	3,160	2,890	2,480	2,160	1,910	1,720	1,550	1,420	1,210	1,050
100	7,630	6,320	5,480	4,860	4,380	3,990	3,670	3,170	2,780	2,480	2,230	2,030	1,860	1,580	1,380
125	8,960	7,460	6,480	5,770	5,220	4,780	4,410	3,820	3,370	3,010	2,720	2,480	2,280	1,950	1,710
150	10,210	8,520	7,430	6,640	6,020	5,520	5,100	4,440	3,930	3,530	3,200	2,920	2,690	2,310	2,030
200	12,530	10,510	9,200	8,250	7,510	6,910	6,410	5,620	5,000	4,510	4,110	3,770	3,480	3,010	2,650
250	14,670	12,350	10,840	9,750	8,900	8,210	7,630	6,720	6,010	5,440	4,970	4,570	4,230	3,680	3,250

Table 3.2 – Maximum panel spans for SLS Wind Pressures for Therm-Loc 0.6mm

Note: The SLS load conditions are governed by the Deflection Limit of Span/150.
Grey shaded cells above indicate ULS panel failure is expected prior to deflection limits being exceeded, refer to ULS max spans instead.

4.2 Therm-Loc 0.5mm Skins

4.2.1 Ultimate Limit State (ULS) Wind Pressures

		Therm-Loc Panel – 0.5mm thick steel skins bonded to SL grade EPS-FR core													
Panel Thickness (mm)	ULS Wind Pressures (kPa)														
	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
Maximum Span (mm)															
50	5,130	4,190	3,630	3,240	2,960	2,740	2,560	2,290	2,020	1,730	1,510	1,340	1,210	1,010	860
75	5,900	4,820	4,170	3,730	3,400	3,150	2,950	2,640	2,410	2,230	2,080	1,960	1,810	1,510	1,290
100	6,460	5,270	4,560	4,080	3,730	3,450	3,230	2,880	2,630	2,440	2,280	2,150	2,040	1,860	1,720
125	6,900	5,630	4,880	4,360	3,980	3,680	3,450	3,080	2,810	2,600	2,440	2,300	2,180	1,990	1,840
150	7,260	5,930	5,140	4,590	4,190	3,880	3,630	3,250	2,960	2,740	2,570	2,420	2,290	2,090	1,940
200	7,860	6,420	5,560	4,970	4,540	4,200	3,930	3,510	3,210	2,970	2,780	2,620	2,480	2,270	2,100
250	8,340	6,810	5,900	5,280	4,820	4,460	4,170	3,730	3,400	3,150	2,950	2,780	2,640	2,410	2,230

Table 3.3 – Maximum panel spans for ULS Wind Pressures for Therm-Loc 0.5mm

Note: Green shaded cells above indicate failure mode is predicted to be panel skin wrinkling under bending.
Orange shaded cells above indicate failure mode is predicted to be EPS core shear failure.

4.2.2 Serviceability Limit State (SLS) Wind Pressures

		Therm-Loc Panel – 0.5mm thick steel skins bonded to SL grade EPS-FR core													
Panel Thickness (mm)	SLS Wind Pressures (kPa) for Max Deflection of Span/150														
	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
Maximum Span (mm)															
50	4,380	3,590	3,080	2,710	2,420	2,190	2,000	1,700	1,480	1,300	1,160	1,050	960	810	700
75	5,890	4,870	4,210	3,730	3,360	3,060	2,810	2,410	2,110	1,880	1,690	1,530	1,400	1,190	1,040
100	7,250	6,030	5,240	4,660	4,210	3,850	3,550	3,070	2,710	2,420	2,190	1,990	1,830	1,570	1,370
125	8,500	7,100	6,190	5,530	5,010	4,600	4,250	3,700	3,280	2,940	2,660	2,430	2,240	1,930	1,690
150	9,680	8,110	7,090	6,350	5,770	5,310	4,920	4,300	3,820	3,440	3,120	2,860	2,640	2,280	2,000
200	11,880	9,990	8,770	7,880	7,190	6,630	6,160	5,420	4,840	4,380	4,000	3,680	3,400	2,960	2,610
250	13,900	11,730	10,320	9,300	8,510	7,860	7,330	6,470	5,800	5,270	4,830	4,450	4,130	3,610	3,190

Table 3.4 – Maximum panel spans for SLS Wind Pressures for Therm-Loc 0.5mm

Note: The SLS load conditions are governed by the Deflection Limit of Span/150.
Grey shaded cells above indicate ULS panel failure is expected prior to deflection limits being exceeded, refer to ULS max spans instead.

4.3 Therm-Loc 0.4mm Skins

4.3.1 Ultimate Limit State (ULS) Wind Pressures

		Therm-Loc Panel – 0.4mm thick steel skins bonded to SL grade EPS-FR core													
Panel Thickness (mm)	ULS Wind Pressures (kPa)														
	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
Maximum Span (mm)															
50	4,440	3,620	3,140	2,810	2,560	2,370	2,220	1,980	1,810	1,680	1,510	1,340	1,210	1,010	860
75	5,060	4,130	3,580	3,200	2,920	2,700	2,530	2,260	2,060	1,910	1,790	1,680	1,600	1,460	1,290
100	5,520	4,500	3,900	3,490	3,180	2,950	2,760	2,460	2,250	2,080	1,950	1,840	1,740	1,590	1,470
125	5,880	4,800	4,150	3,720	3,390	3,140	2,940	2,630	2,400	2,220	2,070	1,960	1,860	1,690	1,570
150	6,180	5,040	4,370	3,910	3,570	3,300	3,090	2,760	2,520	2,330	2,180	2,060	1,950	1,780	1,650
200	6,670	5,450	4,720	4,220	3,850	3,570	3,330	2,980	2,720	2,520	2,360	2,220	2,110	1,920	1,780
250	7,080	5,780	5,000	4,470	4,080	3,780	3,540	3,160	2,890	2,670	2,500	2,360	2,230	2,040	1,890

Table 3.5 – Maximum panel spans for ULS Wind Pressures for Therm-Loc 0.4mm

Note: Green shaded cells above indicate failure mode is predicted to be panel skin wrinkling under bending.
Orange shaded cells above indicate failure mode is predicted to be EPS core shear failure.

4.3.2 Serviceability Limit State (SLS) Wind Pressures

		Therm-Loc Panel – 0.4mm thick steel skins bonded to SL grade EPS-FR core													
Panel Thickness (mm)	SLS Wind Pressures (kPa) for Max Deflection of Span/150														
	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0
Maximum Span (mm)															
50	4130	3400	2930	2580	2320	2100	1930	1650	1440	1270	1140	1030	940	800	700
75	5530	4600	3990	3550	3200	2930	2690	2330	2050	1830	1650	1500	1380	1180	1030
100	6800	5680	4950	4420	4010	3680	3400	2960	2620	2350	2130	1950	1790	1540	1350
125	7970	6680	5850	5240	4760	4380	4060	3550	3160	2850	2590	2370	2190	1890	1660
150	9080	7630	6690	6010	5480	5050	4690	4110	3670	3320	3030	2780	2570	2230	1970
200	11120	9380	8260	7440	6800	6290	5860	5170	4640	4210	3860	3560	3300	2880	2550
250	13010	11000	9710	8770	8040	7450	6950	6160	5550	5060	4650	4300	4000	3510	3120

Table 3.6 – Maximum panel spans for SLS Wind Pressures for Therm-Loc 0.4mm

Note: The SLS load conditions are governed by the Deflection Limit of Span/150.
Grey shaded cells above indicate ULS panel failure is expected prior to deflection limits being exceeded, refer to ULS max spans instead.

5 Conclusion

The structural elemental and panel spanning assumptions and calculations for Therm-Loc Sandwich Panels are summarised in this report.

When installed in accordance with the Thermal Panel Solutions Technical Manual R3.1 and the application limitations defined within this report, the Therm-Loc Sandwich Panels will present structurally sound external and internal wall panels and ceiling panels compliant with B1P1 (1), (2)(a)(b)(c) of BCA 2022 Volume 1 and H1P1 (1), (2)(a)(b)(c) & (3) of BCA 2022 Volume 2.

The enclosed assessment and instructions are provided on the provision that the construction detailing of the Therm-Loc Sandwich Panels are specified, detailed and installed in accordance with instructions contained in the Thermal Panel Solutions Technical Manual R3.1, Thermal Panel Solutions Construction Details manual Rev 0, industry standards, this report and any other appropriate standards and manufacturer instructions.

6 Disclaimer

This report provides no warranty as to the performance of any material, structure or component outside the scope of the elements of construction described in this report.

This report is considered suitable for providing proof of compliance with the nominated BCA Clauses for the nominated project where the loading conditions, installation and general application details are within the scope of limitations as defined within this report.

Other Project Consultants including the Building Certifier must satisfy themselves that the information contained within this report is suitable for the intended project.

Project specific details outside the scope of the limitations of this report are excluded from this report and shall be assessed individually with all available information present.

Clarkson Consulting Services was not involved in product testing of the proposed construction elements and therefore takes no responsibility for the accuracy of the referenced test results provided. Any deviations from, changes to, or substitution from any material or component specified in this report and the supporting design detail drawings shall make this report invalid.

It is the Builder's responsibility to ensure compliance of the products and technical literature remains within an acceptable quality range, consistent with the tested products.

This report must be printed and reviewed in full.

7 Report Author

Signature:		Name:	Scott Clarkson
Qualifications / Registration:	BE (Civil) MIEAust, NER NSW Registration: PRE0002151 VIC Registration: PE0011821	Date:	5 March 2026