Petima Pty Ltd
Factory 52, 37-39 East Street
Daylesford VIC 3460

RE: SPA and Tridek SIPs Structural Assessment Report

Appendix A Tridek SIPs (EPS/XPS/PUR cores) Loading Capacity and Span Tables For Non-Cyclonic Areas

Assessment Items

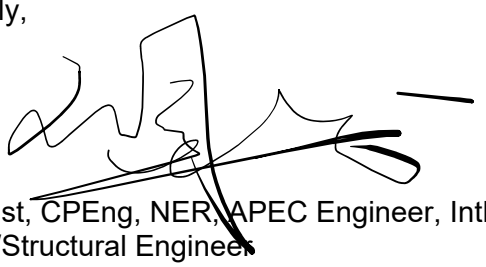
The items have been checked are as listed below:

- Roof framing and cladding: Tridek SIPs (EPS/XPS/PUR cores)

Note:
Wind loads calculated in accordance with AS1170.2 and AS4055 for non-cyclonic areas.
SIPs like all EPS/XPS/PUR products will creep under the action of long term loads. It is recommended that long term deflections should be estimated using a factor of 4 TO 7 times the initial deflections for SIPs Panels.

This appendix must be used in conjunction with the SPA and Tridek SIPs Structural Assessment Report, prepared by Metroeng Pty Ltd, dated 9 June 2021

Yours Faithfully,



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Principal Civil/Structural Engineer
For and on behalf of Metroeng Pty. Ltd.

Building Code of Australia Compliance

The Loading Capacity and Span Tables complies with the following provisions of Building Regulations 2018 (Victoria):

- NCC 2019 Building Code of Australia - Volume Two
  - 2.1.1 P2.1 (a)
  - 2.1.1 P2.1 (b) (i) and (ii)
  - 2.1.1 P2.1 (b) (iii)
  - 2.1.1 P2.1 (b) (iv) for non-cyclonic areas only
  - 2.1.1 P2.1 (c) for non-cyclonic areas only
  - 3.0.2 (a)&(b)
  - 3.0.3 (a)&(b)
  - 3.0.3 (c)(i)
  - 3.0.3 (c)(ii) for non-cyclonic areas only
  - 3.0.3 (c)(iv)

- Relevant Australian Standards
  - 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 1170.2-2011 Structural design actions Part 2: Wind for non-cyclonic areas only
  - AS1170.4-2007 Structural design action Part 4: Earthquake actions in Australia
  - AS4055-2012 Wind loads for housing for non-cyclonic areas only
  - AS1720.1-2010 Timber structures Part 1: Design methods
  - AS1684.2-2010 Residential timber-framed construction Part 2: Non-Cyclonic Areas
  - AS1684.4-2010 Residential timber-framed construction Part 4: Simplified Non-Cyclonic Areas

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0.42 Tridek SIPs Roof Allowable Span for N1/N2 Wind Class or 0.89 kPa uplift ultimate wind pressure
Results are governed by long term dead load and live load effects

Maximum Span (m) for span/300 maximum deflection				
Panel thickness	Tridek Profile (EPS/XPS/PUR cores)			
	Classic	Pro	Smart	Icon
100	4.44	3.75	4.44	3.75
125	5.38	4.72	5.38	4.72
145	6.07	5.47	6.07	5.47
165	6.74	6.12	6.74	6.12
200	7.83	7.30	7.83	7.30
250	9.27	8.86	9.27	8.86
300	10.61	10.31	10.61	10.31

Maximum Span (m) for 12mm maximum deflection				
Panel thickness	Tridek Profile (EPS/XPS/PUR cores)			
	Classic	Pro	Smart	Icon
100	4.21	3.71	4.21	3.71
125	4.87	4.41	4.87	4.41
145	5.33	4.92	5.33	4.92
165	5.76	5.36	5.76	5.36
200	6.44	6.12	6.44	6.12
250	7.32	7.08	7.32	7.08
300	8.10	7.92	8.10	7.92

Note: Site wind classifications and uplift wind loads in accordance with AS4055 and AS1170.2. must checked by qualified engineer.

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0.42 Tridek SIPs Roof Allowable Span for N3 Wind Class or 1.43kPa uplift ultimate wind pressure
Results are governed by long term dead load and live load effects

Maximum Span (m) for span/300 maximum deflection				
Panel thickness	**Tridek Profile (EPS/XPS/PUR cores)**			
	Classic	Pro	Smart	Icon
100	4.44	3.75	4.44	3.75
125	5.38	4.72	5.38	4.72
145	6.07	5.47	6.07	5.47
165	6.74	6.12	6.74	6.12
200	7.83	7.30	7.83	7.30
250	9.27	8.86	9.27	8.86
300	10.61	10.31	10.61	10.31

Maximum Span (m) for 12mm maximum deflection				
Panel thickness	**Tridek Profile (EPS/XPS/PUR cores)**			
	Classic	Pro	Smart	Icon
100	4.21	3.71	4.21	3.71
125	4.87	4.41	4.87	4.41
145	5.33	4.92	5.33	4.92
165	5.76	5.36	5.76	5.36
200	6.44	6.12	6.44	6.12
250	7.32	7.08	7.32	7.08
300	8.10	7.92	8.10	7.92

Note: Site wind classifications and uplift wind loads in accordance with AS4055 and AS1170.2. must checked by qualified engineer.

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0.42 Tridek SIPs Roof Allowable Span for N4 Wind Class or 2.15kPa uplift ultimate wind pressure

Maximum Span (m) for span/300 maximum deflection				
Panel thickness	Tridek Profile (EPS/XPS/PUR cores)			
	Classic	Pro	Smart	Icon
100	4.37	3.69	4.37	3.69
125	5.29	4.65	5.29	4.65
145	5.98	5.38	5.98	5.38
165	6.63	6.02	6.63	6.02
200	7.03	7.18	7.03	7.18
250	9.12	8.72	9.12	8.72
300	10.44	10.14	10.44	10.14

Maximum Span (m) for 12mm maximum deflection				
Panel thickness	Tridek Profile (EPS/XPS/PUR cores)			
	Classic	Pro	Smart	Icon
100	4.16	3.67	4.16	3.67
125	4.81	4.36	4.81	4.36
145	5.26	4.86	5.26	4.86
165	5.69	5.29	5.69	5.29
200	6.37	6.04	6.37	6.04
250	7.23	6.99	7.23	6.99
300	8.00	7.83	8.00	7.83

Note: Site wind classifications and uplift wind loads in accordance with AS4055 and AS1170.2. must checked by qualified engineer.

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0.42 Tridek SIPs Roof Allowable Span for N5 Wind Class or 3.39kPa uplift ultimate wind pressure

Maximum Span (m) for span/300 maximum deflection				
Panel thickness	Tridek Profile (EPS/XPS/PUR cores)			
	Classic	Pro	Smart	Icon
100	3.83	3.23	3.83	3.23
125	4.64	4.07	4.64	4.07
145	5.23	4.71	5.23	4.71
165	5.81	5.27	5.81	5.27
200	5.60	6.29	5.60	6.29
250	7.99	7.64	7.99	7.64
300	9.15	8.88	9.15	8.88

Maximum Span (m) for 12mm maximum deflection				
Panel thickness	Tridek Profile			
	Classic	Pro	Smart	Icon
100	3.77	3.32	3.77	3.32
125	4.35	3.95	4.35	3.95
145	4.77	4.40	4.77	4.40
165	5.15	4.79	5.15	4.79
200	5.60	5.47	5.60	5.47
250	6.54	6.33	6.54	6.33
300	7.24	7.09	7.24	7.09

Note: Site wind classifications and uplift wind loads in accordance with AS4055 and AS1170.2. must checked by qualified engineer.

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0.42 Tridek SIPs Roof Allowable Span for N6 Wind Class or 4.33kPa uplift ultimate wind pressure

Maximum Span (m) for span/300 maximum deflection				
Panel thickness	Tridek Profile (EPS/XPS/PUR cores)			
	Classic	Pro	Smart	Icon
100	3.43	2.89	3.43	2.89
125	4.15	3.64	4.15	3.64
145	4.69	4.22	4.69	4.22
165	5.20	4.72	5.20	4.72
200	4.95	5.63	4.95	5.63
250	7.15	6.84	7.15	6.84
300	8.19	7.95	8.19	7.95

Maximum Span (m) for 12mm maximum deflection				
Panel thickness	Tridek Profile (EPS/XPS/PUR cores)			
	Classic	Pro	Smart	Icon
100	3.47	3.06	3.47	3.06
125	4.01	3.63	4.01	3.63
145	4.39	4.06	4.39	4.06
165	4.74	4.41	4.74	4.41
200	4.95	5.04	4.95	5.04
250	6.02	5.83	6.02	5.83
300	6.67	6.52	6.67	6.52

Note: Site wind classifications and uplift wind loads in accordance with AS4055 and AS1170.2. must checked by qualified engineer.

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