

19 July 2010  
Ref: ST0587

**Design Quintessence**  
**Attention: Ian Wood**  
**Unit 25**  
**7-9 Percy Street**  
**Auburn NSW 2144**

## RE: Load Tables for A34 Truss

We have been asked to analyse the proposed A34 Truss and provide a set of load tables.

### Summary

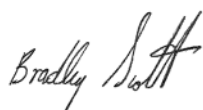
Chord Members	6082 T6	φ50 x 3mm	CHS
Bracing	6082 T6	φ20 x 2mm	CHS
Diagonals	6082 T6	32 x 32 x 6.0	SHS
Coupler	6082 T6		
Bolts	4 High Strength ½"	bolts (f <sub>ut</sub> =1034MPa)	

	φ50 x 3mm Truss
Allowable Normal Force in Main Chord	38.8kN
Allowable Bending Stress in a Chord	114MPa
Allowable Normal Force in Diagonals	9.9kN
Moment of Inertia Y axis	40.4E6 mm <sup>4</sup>
Allowable Bending Moment	23.3kNm
Allowable Shear Force	26.0kN

### Assumptions:

1. The loads specified are in addition to self-weight loads.
2. All loads are to be applied to the bottom chord of the frame.
3. Load capacities make no allowances for wind loads.
4. Trusses are to be connected using standard connectors supplied by manufacturer.
5. Spans need to be supported at each end.

Yours faithfully



**Bradley Scott**  
**BE(Hons) MIE(Aust) CPEng NPER**

### Allowable Loads on A34 Truss

UDL			PL		
Span	LL	Def	Span	LL	Def
mm	kg/m	mm	mm	kg	mm
3000	1223	5	3000	1045	2
4000	776	9	4000	1045	5
5000	491	15	5000	1045	10
6000	337	21	6000	1010	17
7000	244	29	7000	852	23
8000	183	38	8000	732	31
9000	142	48	9000	637	39
10000	112	59	10000	560	49
11000	90	72	11000	495	60
12000	73	86	12000	440	73
13000	60	102	13000	393	87
14000	50	119	14000	351	102
15000	42	139	15000	313	119

TABLE 1