

21 January 2018

Light with Ceiling



SN-R10087479

## PROLAM SUMMARY

Customer/Project: Ashworth

Physical Address: 619 Kerereu Road

Designer: Gordon Sanson, Homeworx Design and Build Limited

PO Box 3394, Onekawa, Napier 4112

E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 1

Building Type

### **Prolam Lintels Supporting Roof and Ceiling**

3 71			3
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

**Roof Weight** 

Roof Pitch  $30^{\circ}$  Snow Region No Snow

Eaves 600 mm
Roof Span 9.00 m
Lintel Span 1.30 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 3.0

Long Term Deflection < 1.0 mm Max. Bearing Reaction 4.1 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 2.75 kN Characteristic Load

### **PRODUCER STATEMENT**



Tasman Consulting Engineers Limited has been engaged by Prowood to provide design services for the development of the Prolam Online calculator.

The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018



SN-R10087480

## PROLAM SUMMARY

Customer/Project: Ashworth

Physical Address: 619 Kerereu Road

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E: gordon@homeworx.co.nz P: 027 513 0323

### Lintel 2

### **Prolam Lintels Supporting Roof and Ceiling**

Building Type	House	Roof Weight	Light with Ceiling
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated

Visual No

Wind Zone Exposed No High  $(44.0 \, \text{m/s})$ 

Roof Pitch 30° **Snow Region** No Snow

Eaves 600 mm Roof Span 8.50 m Lintel Span 1.50 m

#### Use Prolam PL8H1-150100 140 x 90mm PL8

2.4 Capacity Ratio

Long Term Deflection < 1.0 mmMax. Bearing Reaction 4.5 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 3 kN Characteristic Load

## **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



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Light with Ceiling



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House

### Lintel 3

**Ruilding Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Danaing Type	110000	rioor vvoigilio	Ligito widit Coming
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

**Roof Weight.** 

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm
Roof Span 5.00 m
Lintel Span 0.90 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 7.0

Long Term Deflection < 1.0 mm Max. Bearing Reaction 2.6 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.25 kN Characteristic Load

### **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling



SN-R10087482

## PROLAM SUMMARY

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House

### Lintel 4

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

			gg
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

Roof Weight.

Roof Pitch  $30^{\circ}$  Snow Region No Snow

Eaves 600 mm
Roof Span 0.90 m
Lintel Span 2.70 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 2.3

Long Term Deflection < 1.0 mm Max. Bearing Reaction 2.7 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.25 kN Characteristic Load

## **PRODUCER STATEMENT**



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**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



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## PROLAM SUMMARY

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House

### Lintel 5

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Daliding Type	1 10030	11001 VVCIGITO	Light with Oching
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)
Roof Pitch	30 °	Snow Region	No Snow

Roof Weight.

30° Roof Pitch Snow Region 600 mm Eaves

Roof Span 5.00 m

Lintel Span 2.70 m

#### Use Prolam PL8H1-200100 190 x 90mm PL8

2.2 Capacity Ratio

Long Term Deflection < 1.0 mmMax. Bearing Reaction 5.1 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 3.25 kN Characteristic Load

### **PRODUCER STATEMENT**



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**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



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E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 6

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

			gg
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

Roof Weight.

Roof Pitch  $30^{\circ}$  Snow Region No Snow

Eaves 600 mm
Roof Span 6.00 m
Lintel Span 1.40 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 3.7

Long Term Deflection < 1.0 mm Max. Bearing Reaction 3.2 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 2.125 kN Characteristic Load

### **PRODUCER STATEMENT**



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**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



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SN-R10087485

## **PROLAM SUMMARY**

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E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 7

**Ruilding Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Danaing Type	110000	rioor vvoigilio	Ligito widit Coming
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

**Roof Weight.** 

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm
Roof Span 0.90 m
Lintel Span 3.20 m

### Use Prolam PL8H1-200100 190 x 90mm PL8

Capacity Ratio 3.3

Long Term Deflection < 1.0 mm Max. Bearing Reaction 3.0 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.5 kN Characteristic Load

### **PRODUCER STATEMENT**



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**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling

 $(44.0 \, \text{m/s})$ 

High



SN-R10087486

## PROLAM SUMMARY

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E: gordon@homeworx.co.nz P: 027 513 0323

House

No

### Lintel 8

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Dallaling Type	1 10000	1 loor vvoigilio	Ligito widit deliirig
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated

**Roof Weight.** 

Wind Zone

Exposed Roof Pitch 30° **Snow Region** No Snow

Eaves 600 mm Roof Span 4.50 m Lintel Span 1.20 m

#### Use Prolam PL8H1-150100 140 x 90mm PL8

5.0 Capacity Ratio

Long Term Deflection < 1.0 mm Max. Bearing Reaction 2.7 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.375 kN Characteristic Load

### **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling

 $(44.0 \, \text{m/s})$ 

High



SN-R10087487

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E: gordon@homeworx.co.nz P: 027 513 0323

House

No

### Lintel 9

Exposed

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Bananig Type	110000	r ioor v voigilio	Ligitio Widit Coming
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated

Roof Weight.

Wind Zone

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm
Roof Span 8.50 m
Lintel Span 0.80 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 6.8

Long Term Deflection < 1.0 mm Max. Bearing Reaction 2.9 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.75 kN Characteristic Load

### **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling



SN-R10087488

## PROLAM SUMMARY

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House

### Lintel 10

Building Type

### **Prolam Lintels Supporting Roof and Ceiling**

3 71			3
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

Roof Weight

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm
Roof Span 0.90 m
Lintel Span 3.40 m

### Use Prolam PL8H1-200100 190 x 90mm PL8

Capacity Ratio 3.1

Long Term Deflection < 1.0 mm Max. Bearing Reaction 3.1 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.5 kN Characteristic Load

## **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling



SN-R10087489

## PROLAM SUMMARY

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House

### Lintel 11

**Ruilding Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Ballaling Type	110000	1 1001 VV cigito	Light with Coming
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)
Roof Pitch	30 °	Snow Region	No Snow

Roof Weight.

Eaves 600 mm
Roof Span 5.40 m
Lintel Span 2.25 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 1.6

Long Term Deflection 1.9 mm Max. Bearing Reaction 4.5 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 3 kN Characteristic Load

### **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018



SN-R10087490

## ROLAM SUMMARY

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E: gordon@homeworx.co.nz P: 027 513 0323

### Lintel 12

### **Prolam Lintels Supporting Roof and Ceiling**

Building Type	House	Roof Weight	Light with Ceiling
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)
Roof Pitch	30 °	Snow Region	No Snow

600 mm Eaves Roof Span 8.50 m Lintel Span 2.25 m

#### Use Prolam PL8H1-150100 140 x 90mm PL8

1.1 Capacity Ratio

Long Term Deflection 4.5 mm Max. Bearing Reaction 6.6 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 4.375 kN Characteristic Load

### **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling



SN-R10087491

## PROLAM SUMMARY

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E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 13

**Ruilding Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Danaing Type	110000	riodi vvoigiti	Ligito widit deming			
Timber	Pine, Machined	Roof Load	0.40 kPa			
Treatment	H1.2	Live Load	Live Load 0.25 kPa uniform			
Visual	No		1.10 kN concentrated			
Exposed	No	Wind Zone	High (44.0 m/s)			
Roof Pitch	30 °	Snow Region	No Snow			

Roof Weight.

Snow Region

Eaves 600 mm Roof Span 8.50 m

Lintel Span 2.25 m

#### Use Prolam PL8H1-150100 140 x 90mm PL8

1.1 Capacity Ratio

Long Term Deflection 4.5 mm Max. Bearing Reaction 6.6 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 4.375 kN Characteristic Load

### **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



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## **PROLAM SUMMARY**

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E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 14

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Ballallig Type	110000	11001 11019110	2.9.10 11.011 3019	
Timber	Pine, Machined	Roof Load	0.40 kPa	
Treatment	H1.2	Live Load	Live Load O.25 kPa uniform 1.10 kN concentrated	
Visual	No		1.10 kN concentrated	
Exposed	No	Wind Zone	High (44.0 m/s)	

Roof Weight.

Roof Pitch  $30^{\circ}$  Snow Region No Snow

Eaves 600 mm
Roof Span 8.50 m
Lintel Span 2.70 m

### Use Prolam PL8H1-200100 190 x 90mm PL8

Capacity Ratio 1.4

Long Term Deflection 2.2 mm Max. Bearing Reaction 7.9 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 5.25 kN Characteristic Load

### **PRODUCER STATEMENT**



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**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



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SN-R10087493

## PROLAM SUMMARY

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House

### Lintel 15

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Bananig Typo	1 10000	1 1001 VVOIGITO	Ligito Widit Coming
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

Roof Weight.

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm
Roof Span 0.90 m
Lintel Span 3.20 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 1.8

Long Term Deflection 3.6 mm Max. Bearing Reaction 2.9 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.5 kN Characteristic Load

### **PRODUCER STATEMENT**



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**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



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## **PROLAM SUMMARY**

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E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 16

Building Type

### **Prolam Lintels Supporting Roof and Ceiling**

			3 3
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

Roof Weight

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm
Roof Span 0.90 m
Lintel Span 1.60 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 4.6

Long Term Deflection < 1.0 mm Max. Bearing Reaction 2.3 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 0.75 kN Characteristic Load

### **PRODUCER STATEMENT**



Tasman Consulting Engineers Limited has been engaged by Prowood to provide design services for the development of the Prolam Online calculator.

The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling



SN-R10087495

## PROLAM SUMMARY

Customer/Project: Ashworth

Physical Address: 619 Kerereu Road

Designer: Gordon Sanson, Homeworx Design and Build Limited

PO Box 3394, Onekawa, Napier 4112

E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 17

Building Type

### **Prolam Lintels Supporting Roof and Ceiling**

Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

**Roof Weight** 

Roof Pitch  $30^{\circ}$  Snow Region No Snow

Eaves 600 mm
Roof Span 8.50 m
Lintel Span 0.60 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 9.7

Long Term Deflection < 1.0 mm Max. Bearing Reaction 2.6 kN

Load Combination 1.2G + 1.5Qpoint

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 1.375 kN Characteristic Load

### **PRODUCER STATEMENT**



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I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling



SN-R10087496

## PROLAM SUMMARY

Customer/Project: Ashworth

Physical Address: 619 Kerereu Road

Designer: Gordon Sanson, Homeworx Design and Build Limited

PO Box 3394, Onekawa, Napier 4112

E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 18

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

			g	
Timber	Pine, Machined	Roof Load	0.40 kPa	
Treatment	H1.2	Live Load	0.25 kPa uniform 1.10 kN concentrated	
Visual	No		1.10 kN concentrated	
Exposed	No	Wind Zone	High (44.0 m/s)	

Roof Weight.

Roof Pitch  $30^{\circ}$  Snow Region No Snow

Eaves 600 mm
Roof Span 8.50 m
Lintel Span 1.20 m

### Use Prolam PL8H1-150100 140 x 90mm PL8

Capacity Ratio 3.7

Long Term Deflection < 1.0 mm Max. Bearing Reaction 3.6 kN

Load Combination 1.2G + W\_down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 2.5 kN Characteristic Load

### **PRODUCER STATEMENT**



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The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling

 $(44.0 \, \text{m/s})$ 

High



SN-R10087497

## PROLAM SUMMARY

Customer/Project: Ashworth

Physical Address: 619 Kerereu Road

Designer: Gordon Sanson, Homeworx Design and Build Limited

PO Box 3394, Onekawa, Napier 4112

E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 19

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

Bananig Type	110000	11001 11019110	Light with Johning
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	Hiah (44.0 m/s)

Roof Weight.

Exposed Roof Pitch 30° **Snow Region** No Snow

Eaves 600 mm Roof Span 8.50 m Lintel Span 1.20 m

#### Use Prolam PL8H1-150100 140 x 90mm PL8

3.7 Capacity Ratio

Long Term Deflection < 1.0 mmMax. Bearing Reaction 3.6 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 2.5 kN Characteristic Load

### **PRODUCER STATEMENT**



Tasman Consulting Engineers Limited has been engaged by Prowood to provide design services for the development of the Prolam Online calculator.

The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018



SN-R10087498

## **PROLAM SUMMARY**

Customer/Project: Ashworth

Physical Address: 619 Kerereu Road

Designer: Gordon Sanson, Homeworx Design and Build Limited

PO Box 3394, Onekawa, Napier 4112

E: gordon@homeworx.co.nz P: 027 513 0323

### Lintel 20

### Prolam Lintel Supporting Roof, Wall and Floor Joists

Building Type	House	Roof Weight	Light with Ceiling

Timber Pine, Machined Roof Load 0.40 kPa

Treatment H1.2 Live Load 0.25 kPa uniform

Visual No 1.80 kN concentrated

Exposed No Wind Zone High (44.0 m/s)

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm Wall Height 2.40 m

Wall Cladding Light Weight only

Floor Span 6.00 m
Floor Live Load 1.50 kPa
Roof Span 6.00 m
Lintel Span 1.80 m

### Use Prolam PL8H1-200100 190 x 90mm PL8

Capacity Ratio 1.0

Long Term Deflection2.5 mmMax. Bearing Reaction13.6 kNLoad Combination1.2G + 1.5Q

Minimum Bearing Length 35 mm

Uplift Fixing Requirements < 0.5 kN Characteristic Load

### **PRODUCER STATEMENT**



Tasman Consulting Engineers Limited has been engaged by Prowood to provide design services for the development of the Prolam Online calculator.

The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



21 January 2018

Light with Ceiling



SN-R10087500

## **PROLAM SUMMARY**

Customer/Project: Ashworth

Physical Address: 619 Kerereu Road

Designer: Gordon Sanson, Homeworx Design and Build Limited

PO Box 3394, Onekawa, Napier 4112

E: gordon@homeworx.co.nz P: 027 513 0323

House

### Lintel 21

**Building Type** 

### **Prolam Lintels Supporting Roof and Ceiling**

0 71		O O	5
Timber	Pine, Machined	Roof Load	0.40 kPa
Treatment	H1.2	Live Load	0.25 kPa uniform
Visual	No		1.10 kN concentrated
Exposed	No	Wind Zone	High (44.0 m/s)

Roof Weight

Roof Pitch 30 ° Snow Region No Snow

Eaves 600 mm
Roof Span 0.96 m
Lintel Span 4.80 m

### Use Prolam PL8H1-300100 290 x 90mm PL8

Capacity Ratio 3.8

Long Term Deflection < 1.0 mm Max. Bearing Reaction 3.9 kN

Load Combination 1.2G + W down

Minimum Bearing Length 35 mm

Uplift Fixing Requirements 2 kN Characteristic Load

### **PRODUCER STATEMENT**



Tasman Consulting Engineers Limited has been engaged by Prowood to provide design services for the development of the Prolam Online calculator.

The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for GL8, GL12 and GL17 glulam and LVL15.

I believe on reasonable grounds that the above design will meet the requirements of clauses B1/VM1 of the Building Code Documents.

**David King** 

ME (civil, MIPENZ CPEng (no 145511) IntPE

For Tasman Consulting Engineers, PO Box 3631, Richmond, NELSON 7050



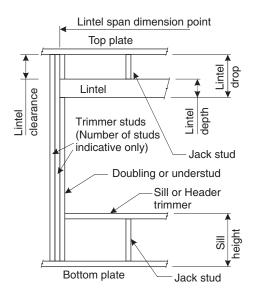
## LINTEL FIXING SCHEDULE

# **ALTERNATIVE TO TABLE 8.14 & FIGURE 8.12 NZS 3604:2011**

### **NOTE:**

- All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20 kPa.
- Refer to Table 8.19 NZS 3604:2011 for nailing schedule to resist horizontal loads.
- These fixings assume the correct choice of rafter/truss to top plate connections have been made.
- All fixings assume bottom plate thickness of 45mm maximum. Note: TYLOK options on timber species.
- Wall framing arrangements under girder trusses are not covered in this schedule.
- ★ All timber selections are as per NZS 3604:2011.

### **DEFINITIONS**



### **Lintel Supporting Girder Trusses:**

Roof	Liah	t Roc	of	Heavy Roof			
Tributary		d Zon			d Zon		
Area	L, M, H VH EH			L, M, H	VH	EH	
8.6 m²	G	G	Н	G	G	Н	
11.6 m²	G	Н	Н	G	G	Н	
12.1 m²	G	Н	Н	G	Н	Н	
15.3 m²	Н	Н	-	G	Н	Н	
19.1 m²	Н	-	-	G	Н	-	
20.9 m²	Н	-	-	Н	Н	-	
21.8 m <sup>2</sup>	Н	-	-	Н	-	-	
34.3 m²	-	-	-	Н	-	-	

### Notes:

- 1) Roof Tributary Area = approx. 1/2 x (Total roof area on girder and rafter trusses supported by lintel)
- 2) Assumed girder truss is at mid-span or middle third span of lintel
- 3) Use similar fixings for both ends of lintel
- 4) All other cases require specific engineering design

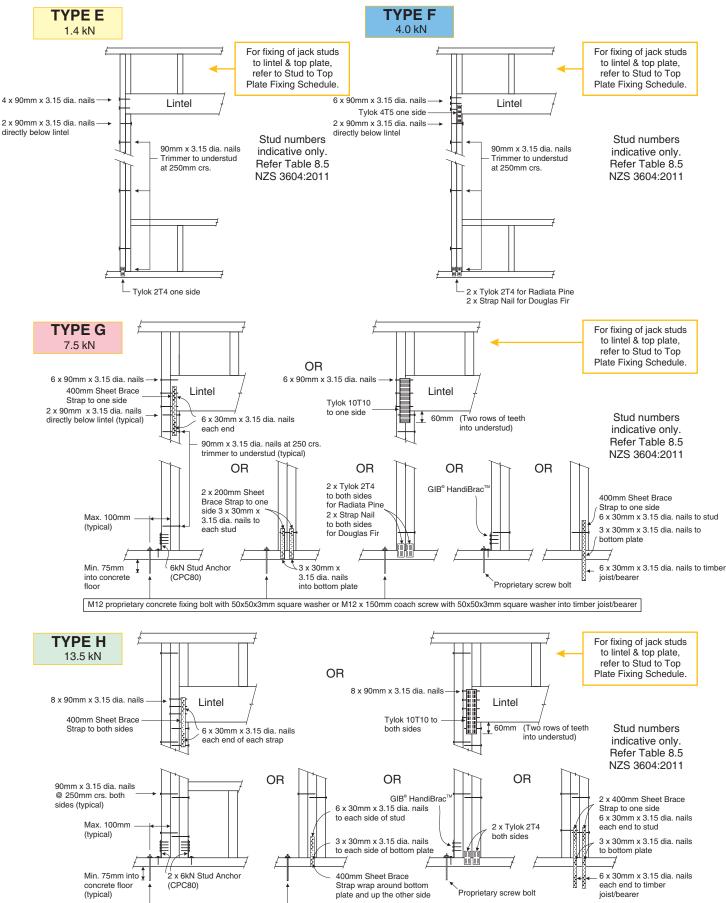
## SELECTION CHART FOR LINTEL FIXING

Lintel	Loaded		Li	ght R	loof			Hea	ıvy F	Roof	
Span	Dimension (See Fig. 1.3		Wi	nd Z	one			Wind Zone			
	(See Fig. 1.3 NZS 3604:2011)	L	М	Н	VH	EH	L	М	Н	VH	EH
0.7	2.0	Е	Е	Е	Е	F	Е	Е	Е	Е	Е
	3.0	Ε	Ε	Ε	F	F	Ε	Ε	Ε	E	F
	4.0	Ε	Ε	F	F	F	Ε	Ε	Ε	F	F
	5.0	Ε	F	F	F	G	Ε	E	F	F	F
	6.0	Е	F	F	G	G	Е	E	F	F	G
0.9	2.0	E	E	Е	F	F	E	E	E	E	F
	3.0	E	E	F	F	F	E	E	E F	F	F
	4.0 5.0	E	F	F	F	G	E	E	F	F	F
	6.0	E	F	F	G	G	E	E	F	F	G
1.0	2.0	Ē	Ē	Ē	F	F	E	E	Ē	Ē	F
	3.0	E	E	F	F	F	Ē	Ē	Ē	F	F
	4.0	Е	F	F	F	G	Ε	Е	F	F	F
	5.0	Е	F	F	G	G	Ε	Ε	F	F	G
	6.0	Е	F	F	G	G	Е	Е	F	F	G
1.2	2.0	Ε	Ε	F	F	F	Ε	E	E	F	F
	3.0	E	E	F	F	F	E	E	F	F	F
	4.0	E	F	F	G	G	E	E	F	F	G
	5.0	E	F	F	G	G	E	E	F	F	G
1.5	6.0 2.0	E	E	G F	G F	H F	E	E	E	G F	G F
1.5	3.0	E	F	F	F	G	E	E	F	F	F
	4.0	Ē	F	F	G	G	Ē	Ē	F	F	G
	5.0	F	F	G	Ğ	Н	Ē	Ē	F	G	Ğ
	6.0	F	F	G	Н	Н	Е	Е	F	G	Н
2.0	2.0	Е	F	F	F	G	Е	Е	F	F	F
	3.0	Е	F	F	G	G	Ε	Е	F	F	G
	4.0	F	F	G	G	Н	Ε	E	F	G	G
	5.0	F	F	G	Н	Н	Е	E	F	G	Н
0.4	6.0	F	G	G	Н	Н	E	F	G	H	Н
2.4	2.0	Е	F	F	G	G	E	E	F	F	G
	3.0 4.0	F	F	G G	G H	H H	E	E	F	G G	G H
	5.0	F	G	G	Н	Н	E	F	G	Н	Н
	6.0	F	G	Н	H	-	Ē	F	G	H	Н
3.0	2.0	E	F	F	G	G	E	E	F	F	G
	3.0	F	F	G	Н	Н	Ε	Е	F	G	Н
	4.0	F	G	G	Н	Н	Ε	F	G	Н	Н
	5.0	F	G	Н	Н	-	Ε	F	G	Н	Н
	6.0	F	G	Н	-	-	E	F	G	Н	-
3.6	2.0	F	F	G	G	H	E	E	F	G	G
	3.0	F	F G	G H	H	H -	E	F	G G	G H	H
	4.0 5.0	F	G	Н	-	_	E	F	G	Н	- -
	6.0	G	Н	Н	_	_	E	F	Н	-	_
4.2	2.0	F	F	G	G	Н	E	E	F	G	G
	3.0	F	G	Н	Н	-	Ē	F	G	Н	Н
	4.0	F	Ğ	Н	-	-	Ē	F	G	Н	-
	5.0	G	Н	Н	-	-	Ε	F	Н	-	-
	6.0	G	Н	-	-	-	Е	F	Н	-	-
4.5	2.0	F	F	G	Н	Н	Е	Е	F	G	Н
	3.0	F	G	Н	Н	-	E	F	G	Н	Н
	3.4	F	G	Н	Н	-	E	F	G	Н	-
	4.0	F	G	H	-	-	E	F	G	Н	-
	5.0	G G	Н	-	-	-	E E	F	Н	-	-
4.8	6.0 2.0	F	H F	G	- Н	-	E	E	H F	G	- Н
4.0	3.0	F	G	Н	Н	- -	E	F	G	Н	Н
	3.2	F	G	Н	Н	_	F	F	G	Н	-
	4.0	F	G	H	-	-	Ė	F	Н	Н	-
	5.0	G	Н	-	-	-	E	F	H	-	-
	6.0	G	Н	-	-	-	E	F	Н	-	-



### LINTEL FIXING OPTIONS







### **MiTek New Zealand Limited**

AUCKLAND PO Box 58-014, Botany 2163 Phone: 09-274 7109 Fax: 09-274 7100 CHRISTCHURCH
PO Box 8387, Riccarton 8440
Phone: 03-348 8691
Fax: 03-348 0314

M12 proprietary concrete fixing bolt with 50x50x3mm square washer or M12 x 150mm coach screw with 50x50x3mm square washer into timber joist/bearer



**PROLAM**<sup>®</sup> products are manufactured to the requirements of AS/NZS 1328.1:1998 Glue Laminated Structural Timber, and AS/NZS 1491:1996 Finger Jointed Structural Timber under an approved quality system based on the 1SO 9000 series of standards. As such if the product is used in accordance with **PROLAM**<sup>®</sup> product literature, it will meet the durability clauses of the New Zealand Building Code B2.

### **Subfloor Applications:**

PROLAM<sup>®</sup> may be used where approved practices for clearance and ventilation are used.

### **External Use:**

PROLAM<sup>®</sup> is recommended for weather exposed applications if sealed and maintained in accordance with PROLAM<sup>®</sup> literature.

### Preservative Treatment:

- PROLAM<sup>®</sup> Beams are CCA H3.2 treated as defined by NZS 3640:2003, for weather exposed applications, such as verandah beams, deck bearers, and subfloor applications.
- PROLAM® Posts are CCA H5 treated as defined by NZS 3640:2003 for in-ground and weather exposed applications, such as deck piles, verandah posts and similar applications.

### Storage of **PROLAM**<sup>®</sup>:

- ☑ To ensure PROLAM<sup>®</sup> remains straight and true at the time of installation, follow the below recommendations:
- 1. Store under cover so that it remains dry until installation.
- 2. Stack clear of the ground for good ventilation.
- 3. Stack on bearers to keep flat and straight.

### Branded **PROLAM**<sup>®</sup>:

PROLAM<sup>®</sup> is branded for your protection. Look-alike materials may not perform to the standard of PROLAM<sup>®</sup>. For your protection do not accept unauthorized substitution