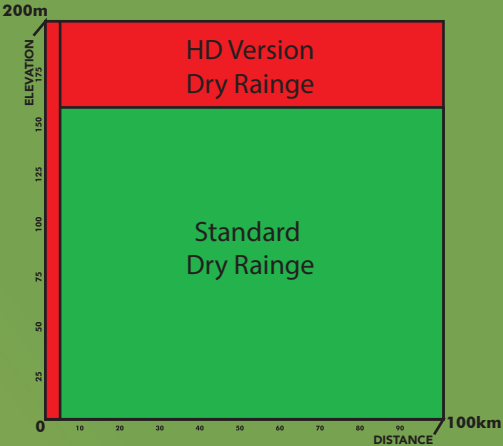
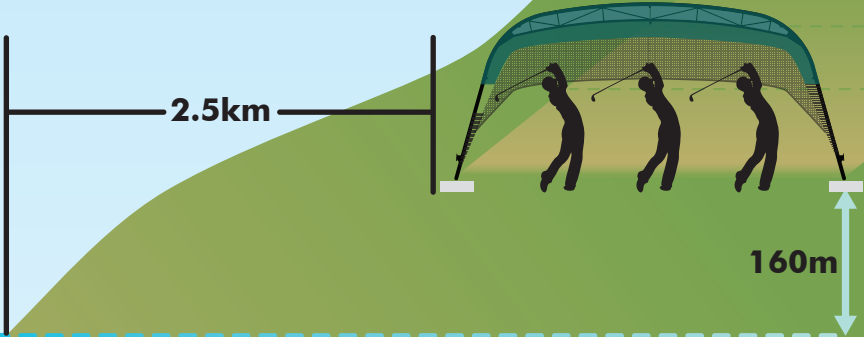




27.3 m/s
63 mph
Beaufort - 10

- UK Baseline Extreme Wind speed, 24 Metres/Second (m/s) (Excl Scottish Highlands & Islands)
- DryRainge proven to 27m/s, equivalent to 63MPH
- This means that DryRainge will cope with wind speeds exceeding the predicted maximum for all but the extremities of the UK
- 2 Bay & 3 Bay Models proven to this wind speed

The calculations assume a height of installation above Sea Level of 160m - The average UK Elevation, and a minimum distance from the coast of 2.5KM, where the average wind speed is generally higher. Any location falling under these two variables can generally be considered suitable for DryRainge Installation.

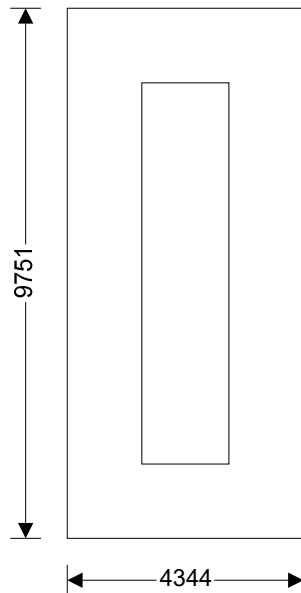


 23 Musters Road West Bridgford Nottingham NG2 7PP	Project				Job Ref.	
	Dry Range Mark 2 3 man				16/C080	
	Section				Sheet no./rev.	
	Wind Loading				1	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	JL	10/05/2016	GC	08/05/2016	JSL	08/05/2016

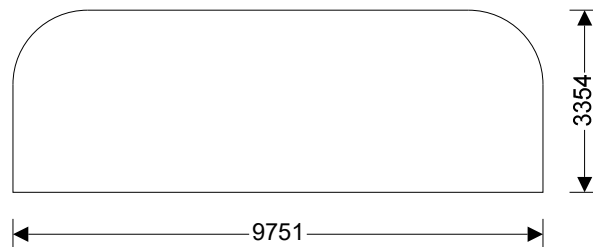
WIND LOADING (EN1991)

WIND LOADING (EN1991-1-4)

TEDDS calculation version 3.0.16



Plan



Elevation

Building data

Type of roof
Length of building
Width of building
Height to eaves
Eaves type
Radius of curve
Total height

Flat
L = **4344** mm
W = **9751** mm
H = **3354** mm
Curved
r = **1370** mm
h = **3354** mm

Basic values

Location
Wind speed velocity (FigureNA.1)
Distance to shore
Altitude above sea level
Altitude factor
Fundamental basic wind velocity
Direction factor
Season factor
Shape parameter K
Exponent n
Probability factor
Basic wind velocity (Exp. 4.1)
Reference mean velocity pressure

Swansea
 $V_{b,map} = \underline{23.5}$ m/s
 $L_{shore} = \underline{2.50}$ km
 $A_{alt} = \underline{160.0}$ m
 $C_{alt} = A_{alt} \times 0.001m^{-1} + 1 = \underline{1.2}$
 $V_{b,0} = V_{b,map} \times C_{alt} = \underline{27.3}$ m/s
 $C_{dir} = \underline{1.00}$
 $C_{season} = \underline{1.00}$
 $K = \underline{0.2}$
 $n = \underline{0.5}$
 $C_{prob} = [(1 - K \times \ln(-\ln(1-p)))/(1 - K \times \ln(-\ln(0.98)))]^n = \underline{1.00}$
 $V_b = C_{dir} \times C_{season} \times V_{b,0} \times C_{prob} = \underline{27.3}$ m/s
 $q_b = 0.5 \times \rho \times v_b^2 = \underline{0.456}$ kN/m²

Orography

Type of feature

Hills and ridges

 23 Musters Road West Bridgford Nottingham NG2 7PP	Project				Job Ref.	
	Dry Range Mark 2 3 man				16/C080	
	Section				Sheet no./rev.	
	Wind Loading				2	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	JL	10/05/2016	GC	08/05/2016	JSL	08/05/2016

Actual length of upwind slope in wind direction $L_u = \underline{150000}$ mm
Actual length downwind slope in wind direction $L_d = \underline{150000}$ mm
Effective height of feature $Z = \underline{100000}$ mm
Upwind slope in upwind direction $\phi = Z / L_u = \underline{0.67}$
Effective length of upwind slope (Table A.2) $L_e = Z / 0.3 = \underline{333333}$ mm
Horiz distance of the site from the top of the crest $x = \underline{0}$ mm
Terrain category Country
Displacement height (sheltering effect excluded) $h_{dis} = 0$ mm

The velocity pressure for the windward face of the building with a 0 degree wind is to be considered as 1 part as the height h is less than b (cl.7.2.2)

The velocity pressure for the windward face of the building with a 90 degree wind is to be considered as 1 part as the height h is less than b (cl.7.2.2)

Peak velocity pressure - windward wall - Wind 0 deg and roof

Reference height (at which q is sought) $z = \underline{3354}$ mm
Displacement height (sheltering effects excluded) $h_{dis} = \underline{0}$ mm
Orographic location factor (Figure A.3) $s = \underline{0.99}$
Orography factor $C_o = 1 + 0.6 \times s = \underline{1.60}$
Exposure factor (Figure NA.7) $C_e = \underline{1.90}$
Peak velocity pressure $q_p = C_e \times ((C_o + 0.6) / 1.6)^2 \times q_b = \underline{1.63}$ kN/m²

Structural factor

Structural damping $\delta_s = \underline{0.050}$
Height of element $h_{part} = \underline{3354}$ mm
Size factor (Table NA.3) $C_s = \underline{0.968}$
Dynamic factor (Figure NA.9) $C_d = \underline{1.046}$
Structural factor $C_s C_d = C_s \times C_d = \underline{1.012}$

Peak velocity pressure - windward wall - Wind 90 deg and roof

Reference height (at which q is sought) $z = \underline{3354}$ mm
Displacement height (sheltering effects excluded) $h_{dis} = \underline{0}$ mm
Orographic location factor (Figure A.3) $s = \underline{0.99}$
Orography factor $C_o = 1 + 0.6 \times s = \underline{1.60}$
Exposure factor (Figure NA.7) $C_e = \underline{1.90}$
Peak velocity pressure $q_p = C_e \times ((C_o + 0.6) / 1.6)^2 \times q_b = \underline{1.63}$ kN/m²

Structural factor

Structural damping $\delta_s = \underline{0.050}$
Height of element $h_{part} = \underline{3354}$ mm
Size factor (Table NA.3) $C_s = \underline{0.931}$
Dynamic factor (Figure NA.9) $C_d = \underline{1.025}$
Structural factor $C_s C_d = C_s \times C_d = \underline{0.954}$

Peak velocity pressure for internal pressure

Peak velocity pressure – internal (as roof press.) $q_{p,i} = \underline{1.63}$ kN/m²

Pressures and forces

Net pressure $p = C_s C_d \times q_p \times C_{pe} - q_{p,i} \times C_{pi}$
Net force $F_w = p_w \times A_{ref}$

Roof load case 1 - Wind 0, C_{pi} 0.20, $-C_{pe}$

 23 Musters Road West Bridgford Nottingham NG2 7PP	Project				Job Ref.	
	Dry Range Mark 2 3 man				16/C080	
	Section				Sheet no./rev.	
	Wind Loading				3	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	JL	10/05/2016	GC	08/05/2016	JSL	08/05/2016

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
F (-ve)	-0.55	1.63	-1.22	-1.23	0.94	-1.15	-1.16
G (-ve)	-0.55	1.63	-1.22	-1.23	-0.25	0.30	0.30
H (-ve)	-0.30	1.63	-0.81	-0.82	2.79	-2.27	-2.28
I (-ve)	-0.20	1.63	-0.65	-0.65	7.76	-5.05	-5.08

Total vertical net force $F_{w,v} = \underline{\underline{-8.22}}$ kN

Total horizontal net force $F_{w,h} = \underline{\underline{0.00}}$ kN

Walls load case 1 - Wind 0, C_{pi} 0.20, $-C_{pe}$

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
A	-1.20	1.63	-2.28	-2.30	2.91	-6.64	-6.71
B	-0.80	1.63	-1.63	-1.64	11.66	-18.96	-19.15
C	-0.50	1.63	-1.14	-1.15	18.14	-20.65	-20.83
D	0.71	1.63	0.83	0.85	14.57	12.15	12.35
E	-0.33	1.63	-0.85	-0.86	14.57	-12.45	-12.54

Overall loading

Equiv leeward net force for overall section $F_l = F_{w,wEs} = \underline{\underline{-12.5}}$ kN

Net windward force for overall section $F_w = F_{w,wDs} = \underline{\underline{12.4}}$ kN

Lack of correlation (cl.7.2.2(3) – Note) $f_{corr} = \underline{\underline{0.85}}$ as h/W is 0.344

Overall loading overall section $F_{w,D} = f_{corr} \times (F_w - F_l + F_{w,h}) = \underline{\underline{21.2}}$ kN

Roof load case 2 - Wind 0, C_{pi} -0.3, $+C_{pe}$

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
F (+ve)	-0.55	1.63	-0.41	-0.42	0.94	-0.38	-0.39
G (+ve)	-0.55	1.63	-0.41	-0.42	-0.25	0.10	0.10
H (+ve)	-0.30	1.63	0.00	-0.01	2.79	0.00	-0.02
I (+ve)	0.20	1.63	0.81	0.82	7.76	6.31	6.34

Total vertical net force $F_{w,v} = \underline{\underline{6.04}}$ kN

Total horizontal net force $F_{w,h} = \underline{\underline{0.00}}$ kN

Walls load case 2 - Wind 0, C_{pi} -0.3, $+C_{pe}$

 23 Musters Road West Bridgford Nottingham NG2 7PP	Project				Job Ref.	
	Dry Range Mark 2 3 man				16/C080	
	Section				Sheet no./rev.	
	Wind Loading				4	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	JL	10/05/2016	GC	08/05/2016	JSL	08/05/2016

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
A	-1.20	1.63	-1.46	-1.49	2.91	-4.27	-4.34
B	-0.80	1.63	-0.81	-0.83	11.66	-9.48	-9.66
C	-0.50	1.63	-0.33	-0.34	18.14	-5.90	-6.08
D	0.71	1.63	1.65	1.66	14.57	24.00	24.20
E	-0.33	1.63	-0.04	-0.05	14.57	-0.59	-0.69

Overall loading

Equiv leeward net force for overall section

$$F_l = F_{w,WEs} = \underline{-0.7 \text{ kN}}$$

Net windward force for overall section

$$F_w = F_{w,WDs} = \underline{24.2 \text{ kN}}$$

Lack of correlation (cl.7.2.2(3) – Note)

$$f_{corr} = \underline{0.85} \text{ as } h/W \text{ is } 0.344$$

Overall loading overall section

$$F_{w,D} = f_{corr} \times (F_w - F_l + F_{w,h}) = \underline{21.2 \text{ kN}}$$

Roof load case 3 - Wind 90, C_{pi} 0.20, $-C_{pe}$

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
F (-ve)	-0.55	1.63	-1.22	-1.18	2.25	-2.75	-2.65
G (-ve)	-0.55	1.63	-1.22	-1.18	2.45	-2.99	-2.89
H (-ve)	-0.30	1.63	-0.81	-0.79	6.54	-5.32	-5.17

Total vertical net force

$$F_{w,v} = \underline{-10.72 \text{ kN}}$$

Total horizontal net force

$$F_{w,h} = \underline{0.00 \text{ kN}}$$

Walls load case 3 - Wind 90, C_{pi} 0.20, $-C_{pe}$

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
A	-1.20	1.63	-2.28	-2.19	4.50	-10.25	-9.84
B	-0.80	1.63	-1.63	-1.57	10.07	-16.38	-15.77
D	0.77	1.63	0.93	0.87	32.70	30.31	28.41
E	-0.44	1.63	-1.04	-1.01	32.70	-34.01	-32.93

Overall loading

Equiv leeward net force for overall section

$$F_l = F_{w,WEs} = \underline{-32.9 \text{ kN}}$$

Net windward force for overall section

$$F_w = F_{w,WDs} = \underline{28.4 \text{ kN}}$$

Lack of correlation (cl.7.2.2(3) – Note)

$$f_{corr} = \underline{0.85} \text{ as } h/L \text{ is } 0.772$$

Overall loading overall section

$$F_{w,D} = f_{corr} \times (F_w - F_l + F_{w,h}) = \underline{52.1 \text{ kN}}$$

Roof load case 4 - Wind 90, C_{pi} -0.3, $+C_{pe}$

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
F (+ve)	-0.55	1.63	-0.41	-0.37	2.25	-0.92	-0.82
G (+ve)	-0.55	1.63	-0.41	-0.37	2.45	-1.00	-0.90
H (+ve)	-0.30	1.63	0.00	0.02	6.54	0.00	0.15

Total vertical net force $F_{w,v} = \underline{\underline{-1.57}}$ kN

Total horizontal net force $F_{w,h} = \underline{\underline{0.00}}$ kN

Walls load case 4 - Wind 90, c_{pi} -0.3, $+c_{pe}$

Zone	Ext pressure coeff C_{pe}	Peak velocity pressure q_p (kN/m ²)	Net pressure element, p_e (kN/m ²)	Net pressure structure p_s (kN/m ²)	Area A_{ref} (m ²)	Net force element $F_{w,e}$ (kN)	Net force structure $F_{w,s}$ (kN)
A	-1.20	1.63	-1.46	-1.37	4.50	-6.59	-6.18
B	-0.80	1.63	-0.81	-0.75	10.07	-8.19	-7.58
D	0.77	1.63	1.74	1.68	32.70	56.91	55.01
E	-0.44	1.63	-0.23	-0.19	32.70	-7.41	-6.32

Overall loading

Equiv leeward net force for overall section

$$F_l = F_{w,wEs} = \underline{\underline{-6.3}}$$
 kN

Net windward force for overall section

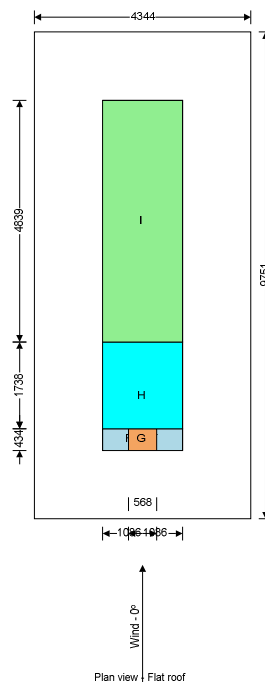
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 kN

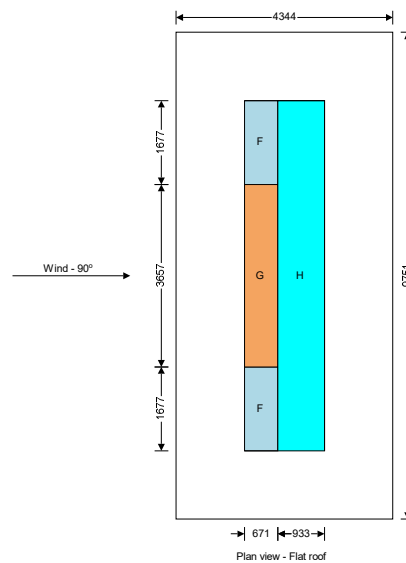
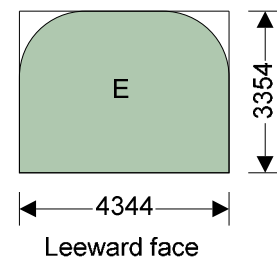
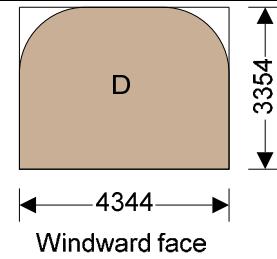
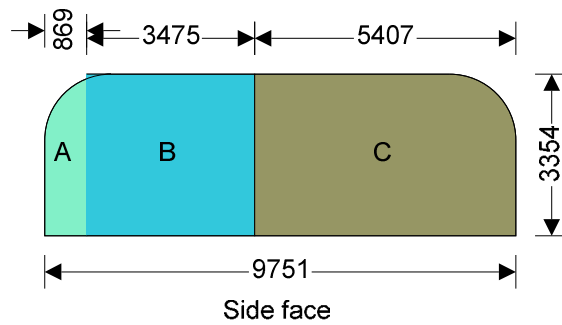
Lack of correlation (cl.7.2.2(3) – Note)

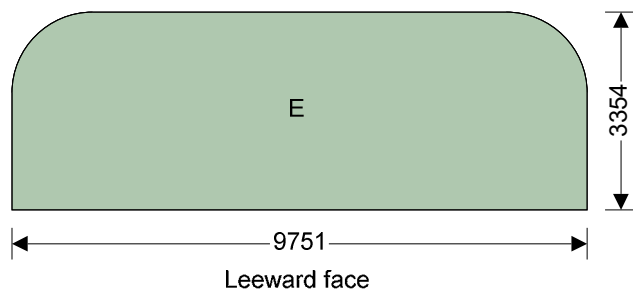
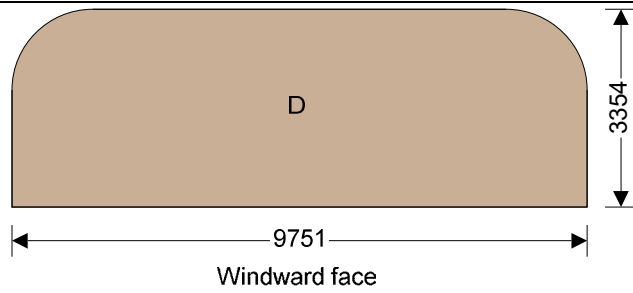
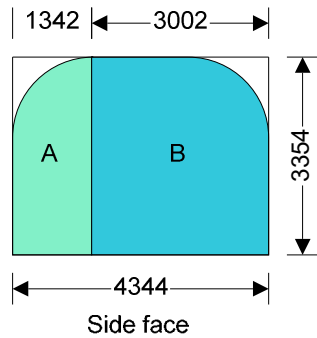
$$f_{corr} = \underline{\underline{0.85}}$$
 as h/L is 0.772

Overall loading overall section

$$F_{w,D} = f_{corr} \times (F_w - F_l + F_{w,h}) = \underline{\underline{52.1}}$$
 kN







 23 Musters Road West Bridgford Nottingham NG2 7PP	Project				Job Ref.	
	Dry Range Mark 2 3 man				16/C080	
	Section				Sheet no./rev.	
	Wind Loading				8	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	JL	10/05/2016	GC	08/05/2016	JSL	08/05/2016

Overall Wind loading to frame (+ve inwards –ve out)

Left leg 2.27kN/m

Roof -0.51kN/m

Right leg -0.3kN/m

These loadings are based on a 40%void of the cover.

 23 Musters Road West Bridgford Nottingham NG2 7PP	Project				Job Ref.	
	Dry Range Mark 2 3 man				16/C080	
	Section				Sheet no./rev.	
	Wind Loading				9	
	Calc. by	Date	Chk'd by	Date	App'd by	Date
	JL	10/05/2016	GC	08/05/2016	JSL	08/05/2016

COVER FRAME

ANALYSIS

Tedds calculation version 1.0.13

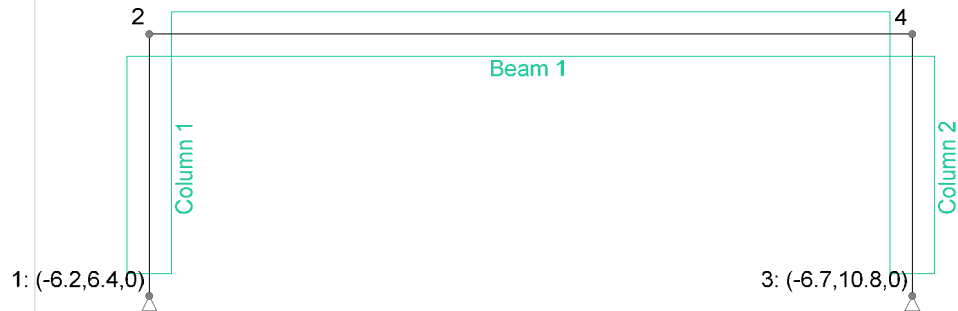
Results

Total base reactions

Load case/combination	Force	
	FX (kN)	FZ (kN)
1.0G + 1.5W (Strength)	-12.9	17.2
1.0G + 1.0W (Service)	-8.6	14.7
1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5 ψ_0 W (Strength)	-6.5	16.9
1.0G + 1.0Q + 0.5S + 0.5W (Service)	-4.3	12.2
1.35G + 1.5Q + 1.5RQ (Strength)	0	13.2
1.0G + 1.0Q + 1.0RQ (Service)	0	9.8
1.0G + 1.0 ψ_2 Q (Quasi)	0	9.8
1.35G + 1.5Q + 1.5 ψ_0 S (Strength)	0	13.2
1.0G + 1.0Q + 0.5S (Service)	0	9.8
1.35G + 1.5 ψ_0 Q + 1.5S (Strength)	0	13.2
1.35G + 1.5Q + 1.5 ψ_0 S + 1.5 ψ_0 W (Strength)	-6.5	16.9
1.35G + 1.5 ψ_0 Q + 1.5S + 1.5 ψ_0 W (Strength)	-6.5	16.9
1.0G + 1.0 ψ_0 Q + 1.0S + 0.5W (Service)	-4.3	12.2
1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5W (Strength)	-12.9	20.6
1.0G + 1.0 ψ_0 Q + 0.5S + 1.0W (Service)	-8.6	14.7
1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 RQ (Strength)	0	13.2
1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S (Strength)	0	13.2
1.35 ξ G + 1.5Q + 1.5RQ (Strength)	0	12.2
1.35 ξ G + 1.5Q + 1.5 ψ_0 S (Strength)	0	12.2
1.35 ξ G + 1.5 ψ_0 Q + 1.5S (Strength)	0	12.2
1.35 ξ G + 1.5Q + 1.5 ψ_0 S + 1.5 ψ_0 W (Strength)	-6.5	15.9
1.35 ξ G + 1.5 ψ_0 Q + 1.5S + 1.5 ψ_0 W (Strength)	-6.5	15.9
1.35 ξ G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5W (Strength)	-12.9	19.6

Reactions

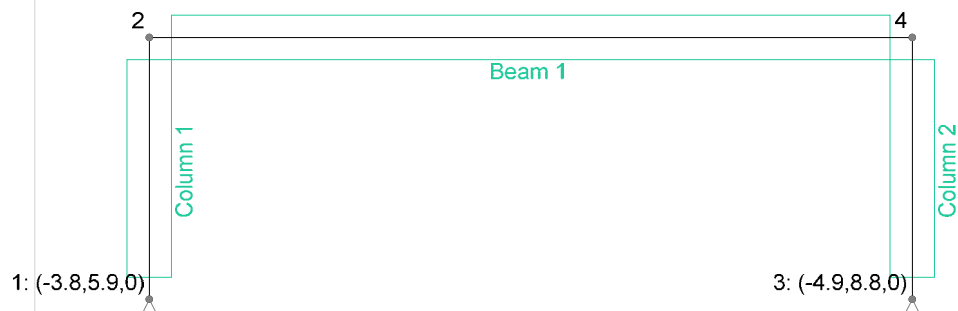
1.0G + 1.5W (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.0G + 1.5W (Strength)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	-6.2	6.4	0
3	-6.7	10.8	0

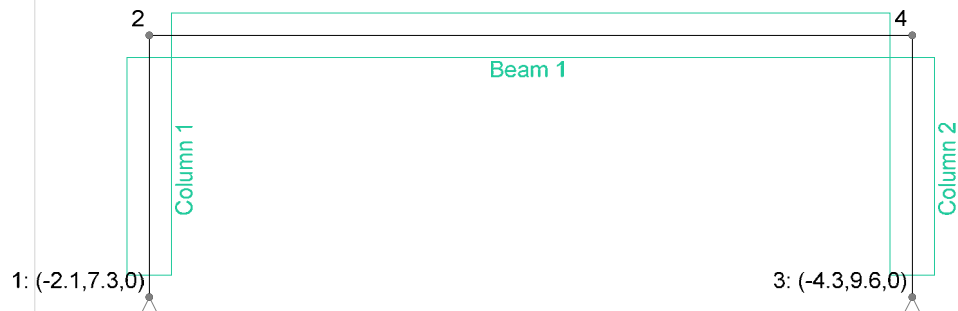
1.0G + 1.0W (Service) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.0G + 1.0W (Service)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	-3.8	5.9	0
3	-4.9	8.8	0

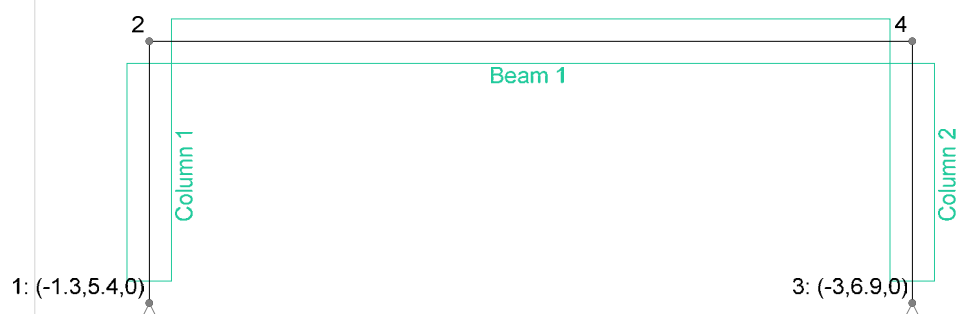
1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5 ψ_0 W (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5 ψ_0 W (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	-2.1	7.3	0
3	-4.3	9.6	0

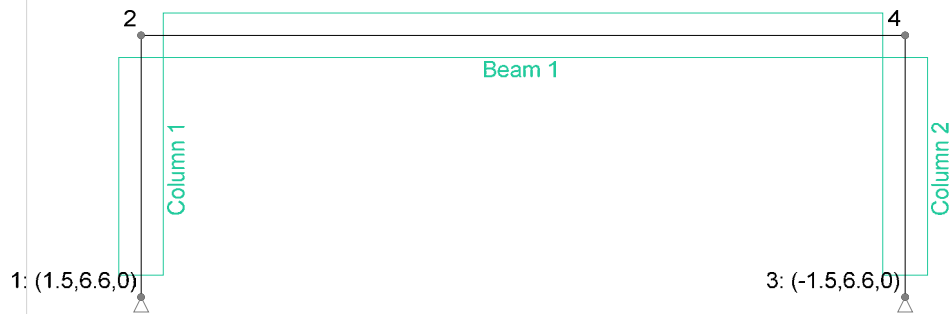
1.0G + 1.0Q + 0.5S + 0.5W (Service) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.0G + 1.0Q + 0.5S + 0.5W (Service)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	-1.3	5.4	0
3	-3	6.9	0

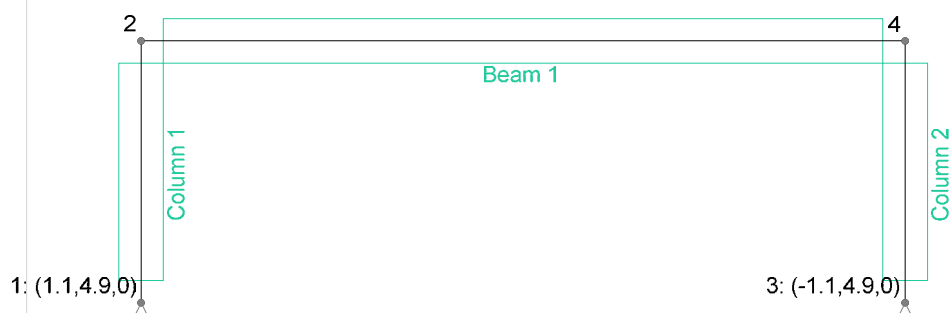
1.35G + 1.5Q + 1.5RQ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.35G + 1.5Q + 1.5RQ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	1.5	6.6	0
3	-1.5	6.6	0

1.0G + 1.0Q + 1.0RQ (Service) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))

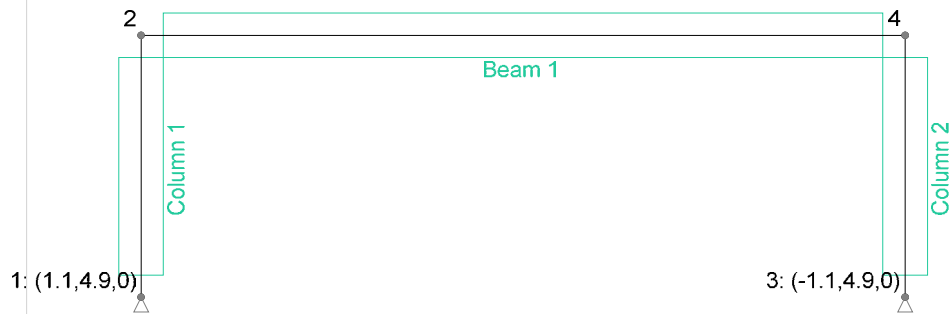


Load combination: 1.0G + 1.0Q + 1.0RQ (Service)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	1.1	4.9	0
3	-1.1	4.9	0

1.0G + 1.0 ψ_2 Q (Quasi) - Local node reactions

Node: (Horiz (kN), Vert (kN), Mom (kNm))

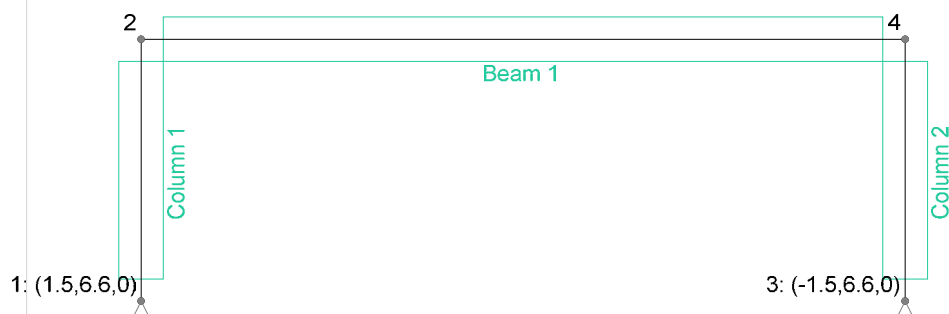


Load combination: 1.0G + 1.0 ψ_2 Q (Quasi)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	1.1	4.9	0
3	-1.1	4.9	0

1.35G + 1.5Q + 1.5 ψ_0 S (Strength) - Local node reactions

Node: (Horiz (kN), Vert (kN), Mom (kNm))

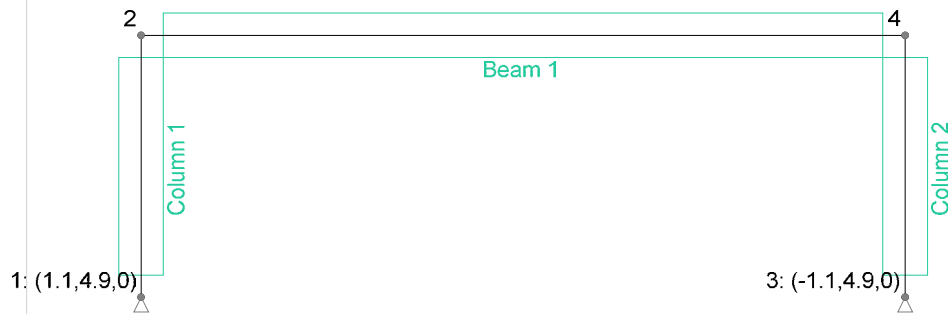


Load combination: 1.35G + 1.5Q + 1.5 ψ_0 S (Strength)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	1.5	6.6	0
3	-1.5	6.6	0

1.0G + 1.0Q + 0.5S (Service) - Local node reactions

Node: (Horiz (kN), Vert (kN), Mom (kNm))

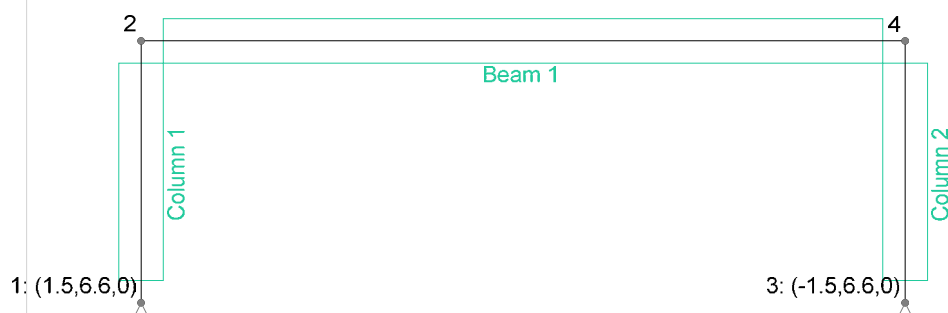


Load combination: 1.0G + 1.0Q + 0.5S (Service)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	1.1	4.9	0
3	-1.1	4.9	0

1.35G + 1.5 ψ_0 Q + 1.5S (Strength) - Local node reactions

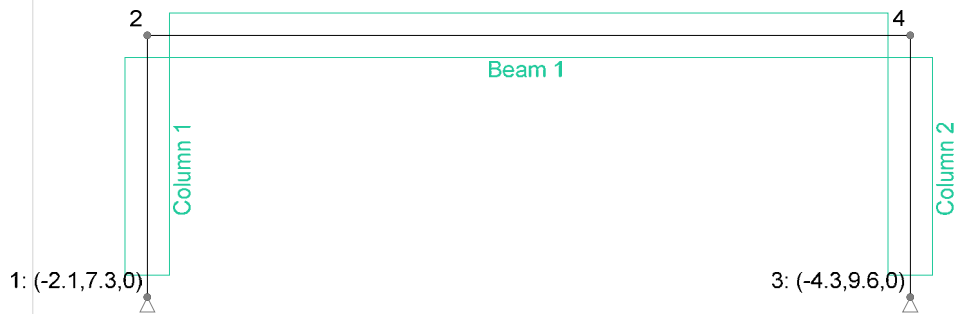
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.35G + 1.5 ψ_0 Q + 1.5S (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	1.5	6.6	0
3	-1.5	6.6	0

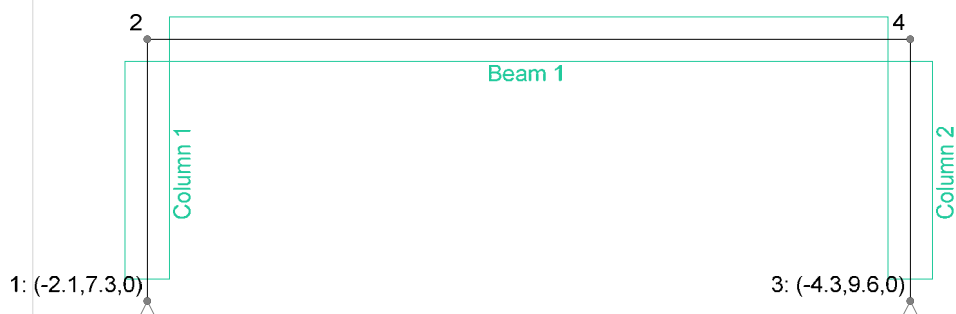
$1.35G + 1.5Q + 1.5\psi_0S + 1.5\psi_0W$ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: $1.35G + 1.5Q + 1.5\psi_0S + 1.5\psi_0W$ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	-2.1	7.3	0
3	-4.3	9.6	0

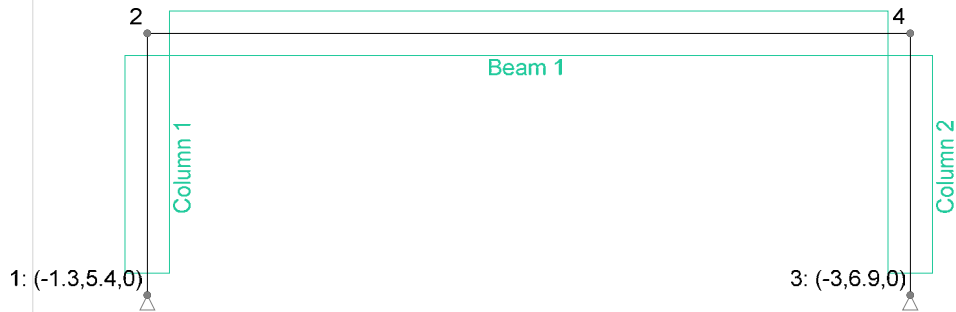
$1.35G + 1.5\psi_0Q + 1.5S + 1.5\psi_0W$ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: $1.35G + 1.5\psi_0Q + 1.5S + 1.5\psi_0W$ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	-2.1	7.3	0
3	-4.3	9.6	0

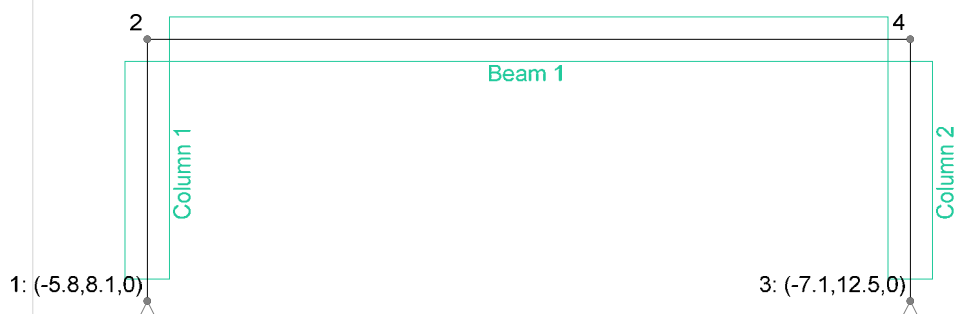
$1.0G + 1.0\psi_0Q + 1.0S + 0.5W$ (Service) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: $1.0G + 1.0\psi_0Q + 1.0S + 0.5W$ (Service)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	-1.3	5.4	0
3	-3	6.9	0

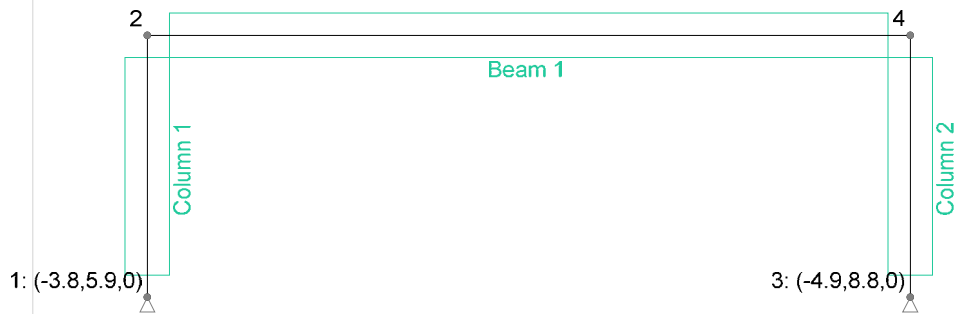
$1.35G + 1.5\psi_0Q + 1.5\psi_0S + 1.5W$ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: $1.35G + 1.5\psi_0Q + 1.5\psi_0S + 1.5W$ (Strength)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	-5.8	8.1	0
3	-7.1	12.5	0

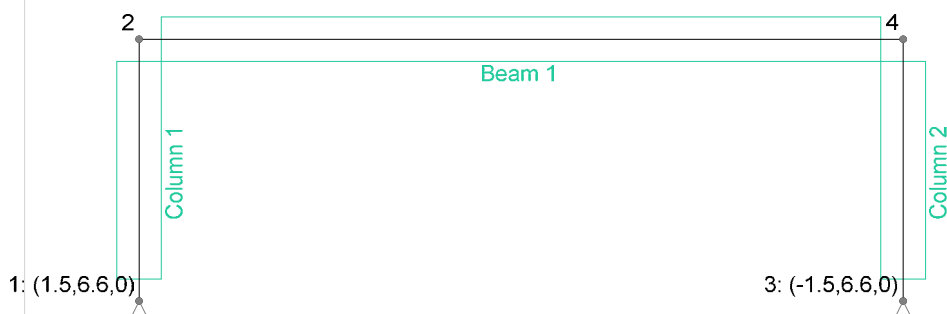
1.0G + 1.0 ψ_0 Q + 0.5S + 1.0W (Service) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.0G + 1.0 ψ_0 Q + 0.5S + 1.0W (Service)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	-3.8	5.9	0
3	-4.9	8.8	0

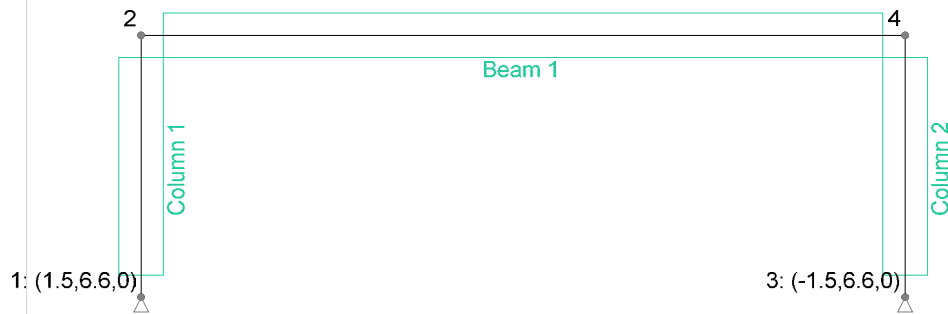
1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 RQ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 RQ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	1.5	6.6	0
3	-1.5	6.6	0

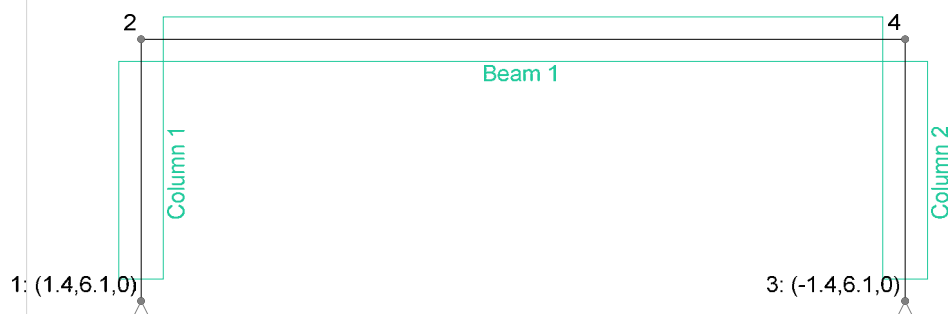
1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: 1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S (Strength)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	1.5	6.6	0
3	-1.5	6.6	0

1.35 ξ G + 1.5Q + 1.5RQ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))

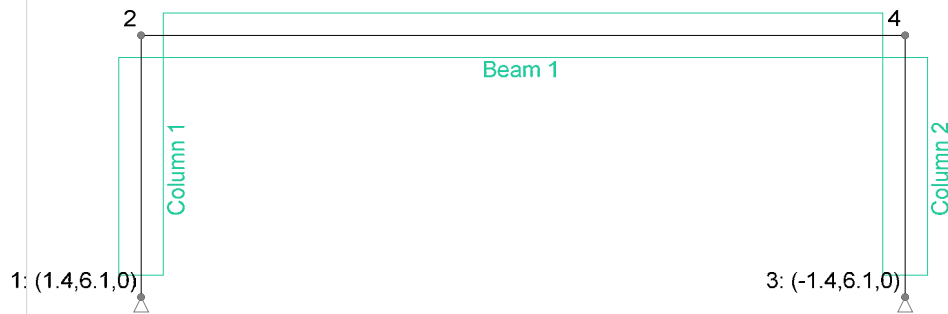


Load combination: 1.35 ξ G + 1.5Q + 1.5RQ (Strength)

Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	1.4	6.1	0
3	-1.4	6.1	0

$1.35\xi G + 1.5Q + 1.5\psi_0 S$ (Strength) - Local node reactions

Node: (Horiz (kN), Vert (kN), Mom (kNm))

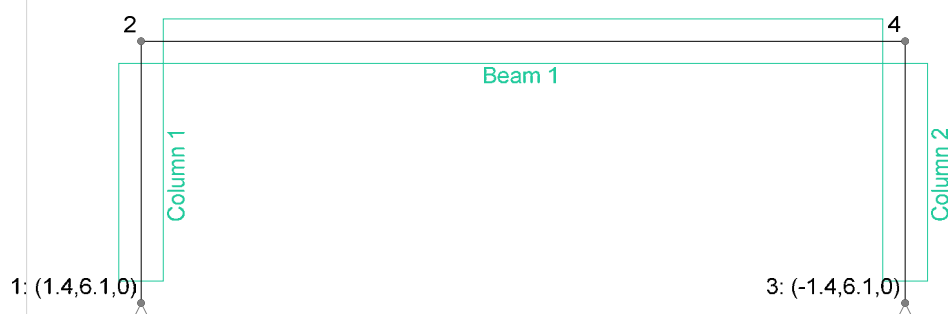


Load combination: $1.35\xi G + 1.5Q + 1.5\psi_0 S$ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	1.4	6.1	0
3	-1.4	6.1	0

$1.35\xi G + 1.5\psi_0 Q + 1.5S$ (Strength) - Local node reactions

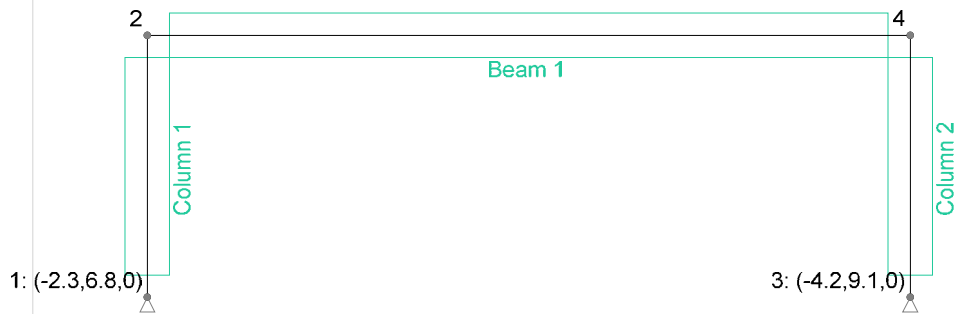
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: $1.35\xi G + 1.5\psi_0 Q + 1.5S$ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	1.4	6.1	0
3	-1.4	6.1	0

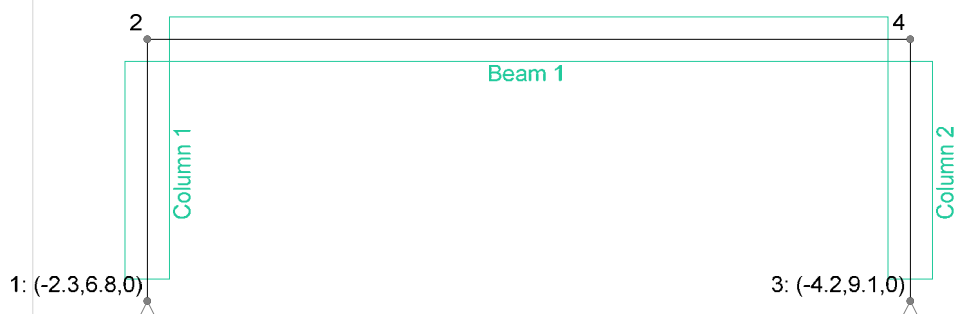
$1.35\xi G + 1.5Q + 1.5\psi_0 S + 1.5\psi_0 W$ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: $1.35\xi G + 1.5Q + 1.5\psi_0 S + 1.5\psi_0 W$ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	-2.3	6.8	0
3	-4.2	9.1	0

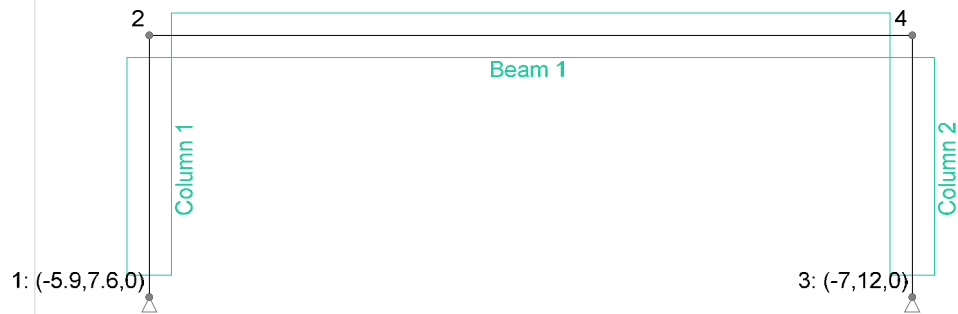
$1.35\xi G + 1.5\psi_0 Q + 1.5S + 1.5\psi_0 W$ (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))



Load combination: $1.35\xi G + 1.5\psi_0 Q + 1.5S + 1.5\psi_0 W$ (Strength)

Node	Force		Moment
	Fx (kN)	Fz (kN)	My (kNm)
1	-2.3	6.8	0
3	-4.2	9.1	0

1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5W (Strength) - Local node reactions
Node: (Horiz (kN), Vert (kN), Mom (kNm))

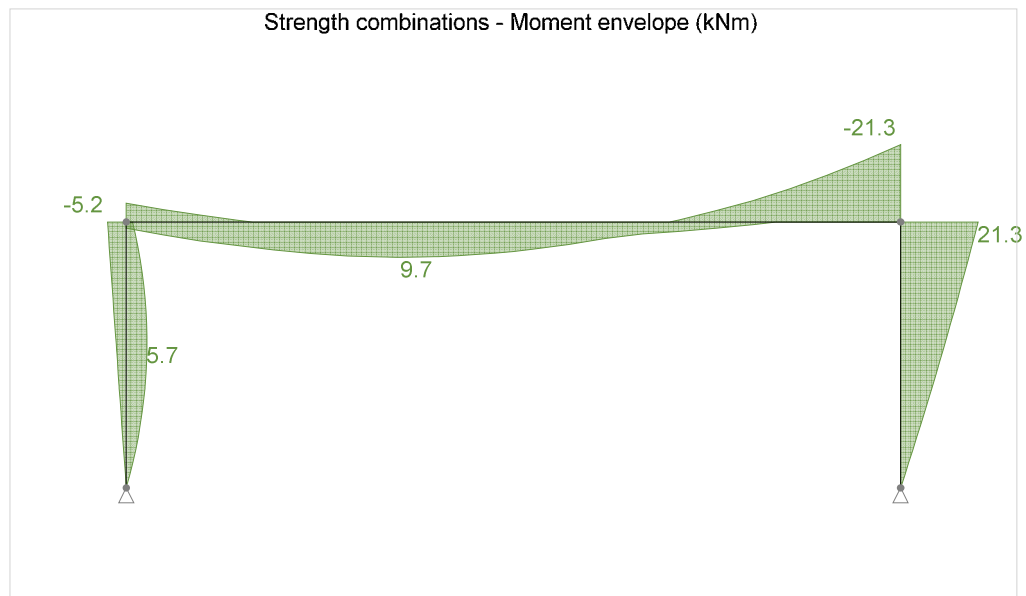


Load combination: 1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5W (Strength)

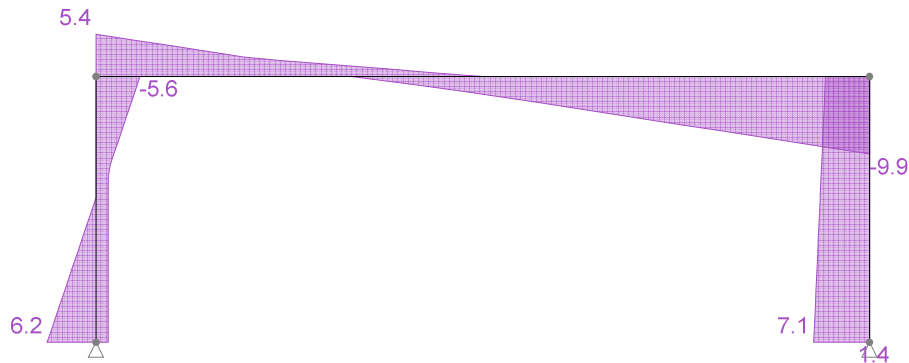
Node	Force		Moment My (kNm)
	Fx (kN)	Fz (kN)	
1	-5.9	7.6	0
3	-7	12	0

Forces

Strength combinations - Moment envelope (kNm)



Strength combinations - Shear envelope (kN)

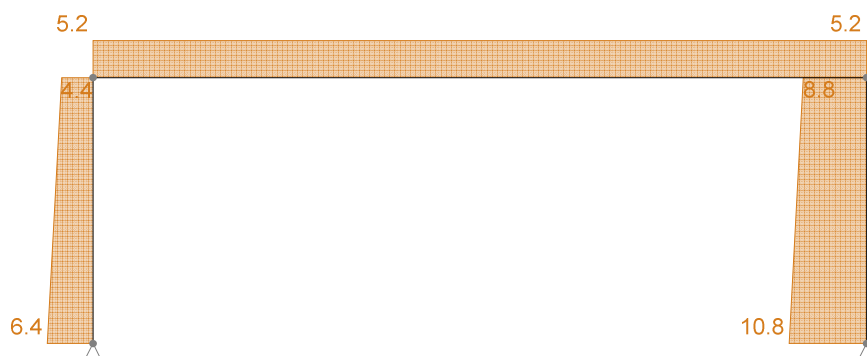


Member results

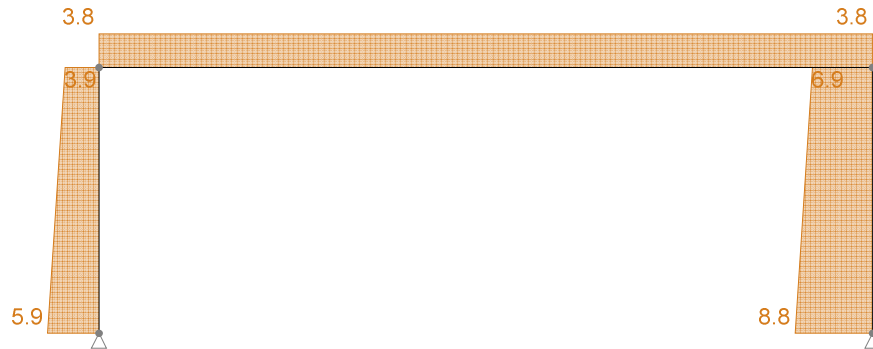
Envelope - Strength combinations

Member	Shear force		Moment			
	Pos (m)	Max abs (kN)	Pos (m)	Max (kNm)	Pos (m)	Min (kNm)
Column 1	0	6.2	1.827	5.7	3.354	-5.2
Column 2	0	7.1	3.354	21.3	0	0
Beam 1	9.751	-9.9	3.455	9.7	9.751	-21.3

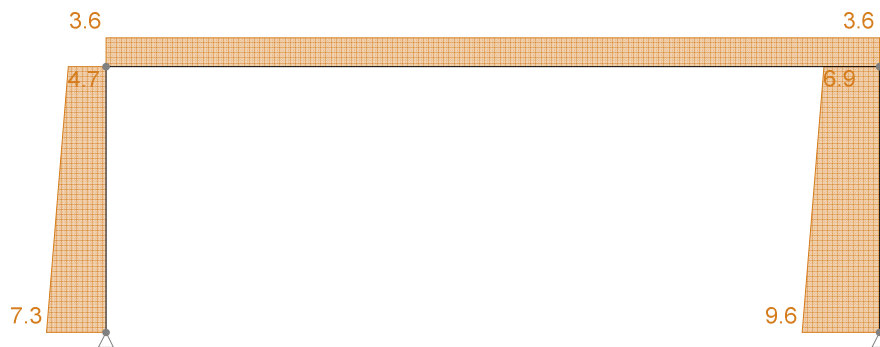
1.0G + 1.5W (Strength) - Axial force (kN)



1.0G + 1.0W (Service) - Axial force (kN)



1.35G + 1.5 ψ_0 Q + 1.5 ψ_0 S + 1.5 ψ_0 W (Strength) - Axial force (kN)



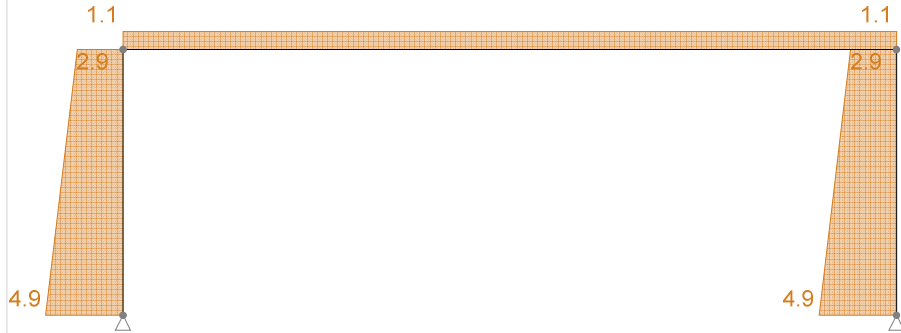
1.0G + 1.0Q + 0.5S + 0.5W (Service) - Axial force (kN)



1.35G + 1.5Q + 1.5RQ (Strength) - Axial force (kN)



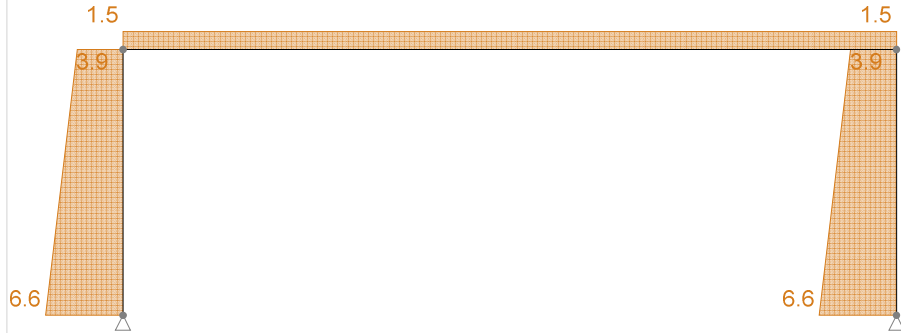
1.0G + 1.0Q + 1.0RQ (Service) - Axial force (kN)



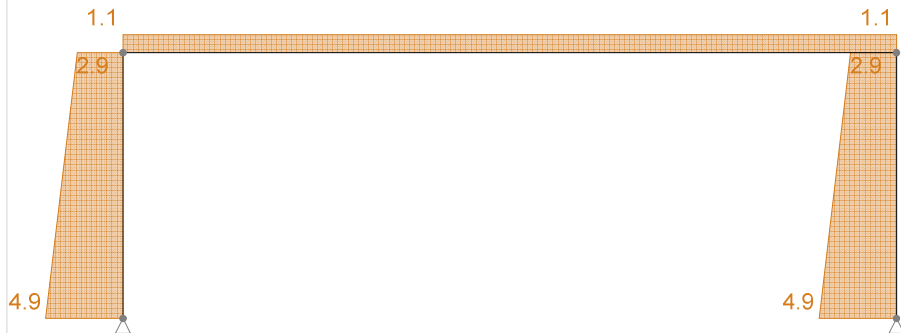
1.0G + 1.0 $\frac{1}{2}$ Q (Quasi) - Axial force (kN)



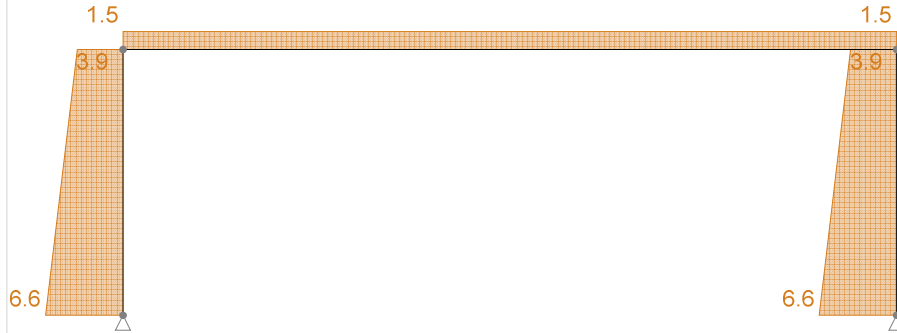
$1.35G + 1.5Q + 1.5\psi_0S$ (Strength) - Axial force (kN)



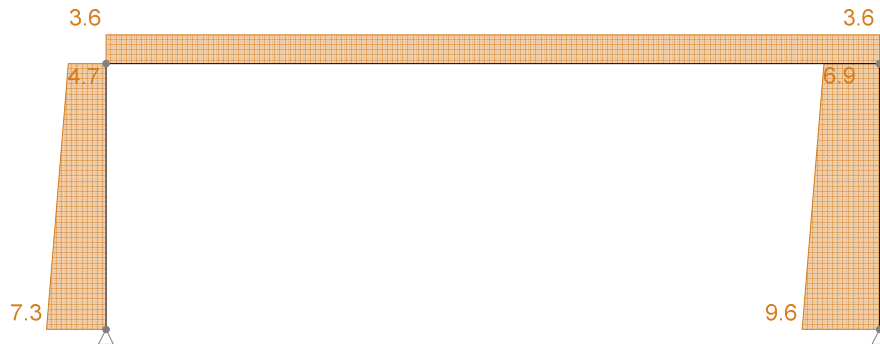
$1.0G + 1.0Q + 0.5S$ (Service) - Axial force (kN)



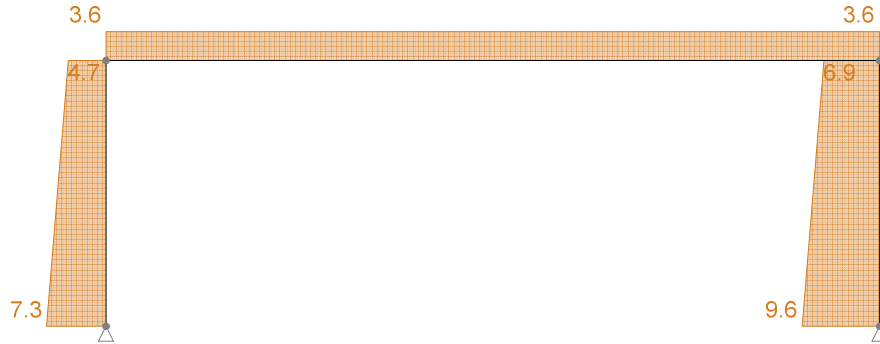
$1.35G + 1.5\psi_0Q + 1.5S$ (Strength) - Axial force (kN)



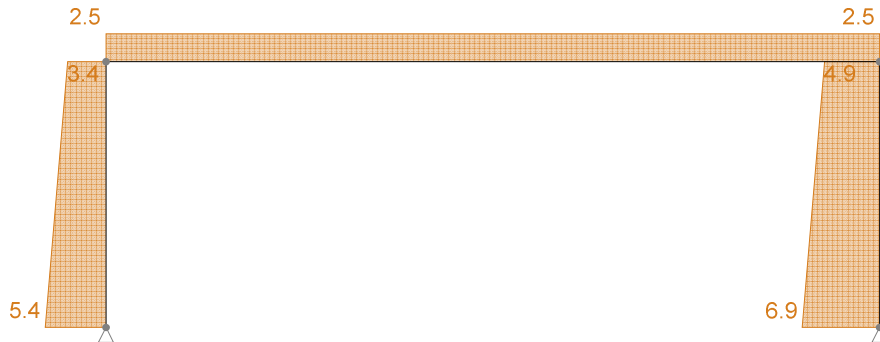
$1.35G + 1.5Q + 1.5\psi_0S + 1.5\psi_0W$ (Strength) - Axial force (kN)



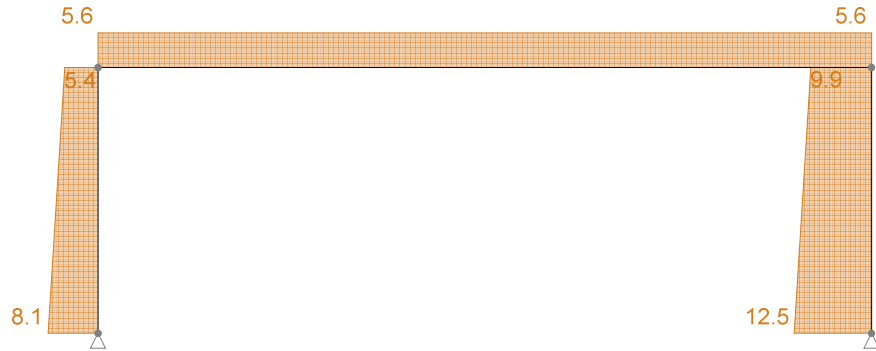
$1.35G + 1.5\psi_0Q + 1.5S + 1.5\psi_0W$ (Strength) - Axial force (kN)



$1.0G + 1.0\psi_0Q + 1.0S + 0.5W$ (Service) - Axial force (kN)



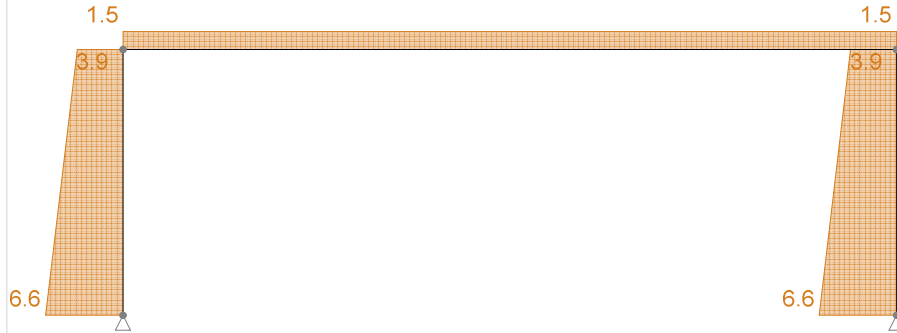
$1.35G + 1.5\psi_0Q + 1.5\psi_0S + 1.5W$ (Strength) - Axial force (kN)



$1.0G + 1.0\psi_0Q + 0.5S + 1.0W$ (Service) - Axial force (kN)



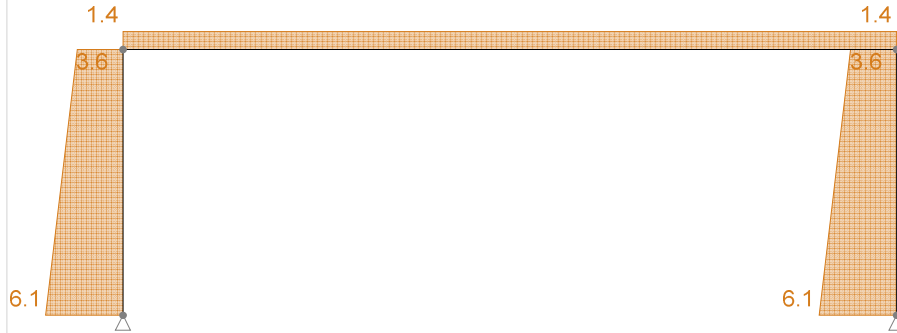
$1.35G + 1.5\psi_0Q + 1.5\psi_0RQ$ (Strength) - Axial force (kN)



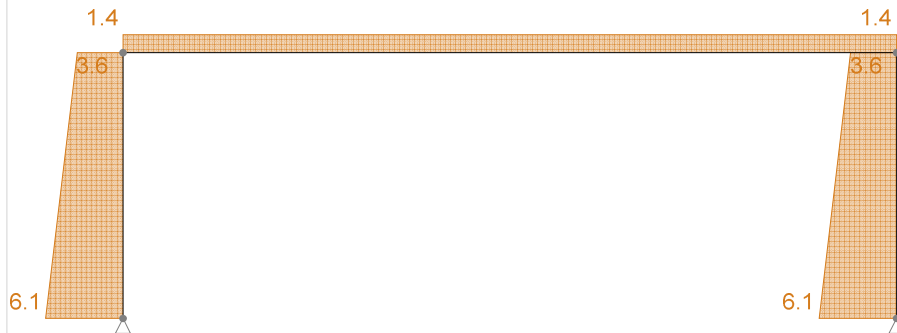
$1.35G + 1.5\psi_0Q + 1.5\psi_0S$ (Strength) - Axial force (kN)



$1.35\xi G + 1.5Q + 1.5RQ$ (Strength) - Axial force (kN)



$1.35\xi G + 1.5Q + 1.5\psi_0 S$ (Strength) - Axial force (kN)



$1.35\xi G + 1.5\psi_0 Q + 1.5S$ (Strength) - Axial force (kN)



$1.35\xi G + 1.5Q + 1.5\psi_0 S + 1.5\psi_0 W$ (Strength) - Axial force (kN)



$1.35\xi G + 1.5\psi_0 Q + 1.5S + 1.5\psi_0 W$ (Strength) - Axial force (kN)



$1.35\xi G + 1.5\psi_0 Q + 1.5\psi_0 S + 1.5W$ (Strength) - Axial force (kN)

