



## Preliminary report (reaction forces): Canopy Roof

The Good Guyz

Preliminary Report

Content : Preliminary Report  
Structure : Canopy Roof  
Manufacturer : Kontent Structures  
Document owner : The Good Guyz  
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## 1. Introduction

The Good Guyz have requested IB Tent Engineers to investigate their canopy roof construction for covering a stage. This document provides the reaction forces needed to validate the truss construction with a third party.

## 2. Contents

1. Introduction.....	2
2. Contents .....	2
3. Overview of the Canopy roof construction .....	5
3.1. RFEM 3D computer model for analysis .....	5
4. Static analysis .....	6
4.1. Standards.....	6
4.2. Documents .....	6
5. Loads on structure.....	7
5.1. Own weight .....	7
5.2. Wind loads.....	7
5.3. Wind pressure coefficients.....	7
5.3.1. Wind load: Wind upwards (LC3) – $c_p \times q_p$ .....	8
5.3.1.1. Situation 1: Structure is not in use ( $q_p = 0.45 \text{ kN/m}^2$ ) .....	9
5.3.1.2. Situation 2: Structure is in use ( $q_p = 0.3 \text{ kN/m}^2$ ).....	9
5.3.2. Wind load: Wind downwards (LC4) – $c_p \times q_p$ .....	10
5.3.2.1. Situation 1: Structure is not in use ( $q_p = 0.45 \text{ kN/m}^2$ ) .....	10
5.3.2.2. Situation 2: Structure is in use ( $q_p = 0.3 \text{ kN/m}^2$ ).....	11
5.4. Roof weights.....	12
5.5. Seismic forces .....	12
5.6. Live loads.....	12
5.7. Equivalent load;.....	12
5.8. Imperfections .....	12
5.9. Load cases and combinations.....	13
5.9.1. Load cases.....	13
5.9.2. Load combinations .....	13
6. Reaction forces.....	14
6.1. Node numbers.....	14
6.2. Reaction forces: Structure is not in use ( $q_p = 0.45 \text{ kN/m}^2$ ).....	15
6.2.1. Own weight (LC1) .....	15
6.2.1.1. Reaction forces (LC1).....	16
6.2.2. Wind from left (LC2) .....	17

6.2.2.1.	Reaction forces (LC2).....	18
6.2.3.	Wind upwards (LC3) .....	19
6.2.3.1.	Reaction forces (LC3).....	20
6.2.4.	Wind downwards (LC4) .....	21
6.2.4.1.	Reaction forces (LC4).....	22
6.2.5.	Roof weights (LC5).....	23
6.2.5.1.	Reaction forces (LC5).....	24
6.2.6.	Equivalent load (LC6).....	25
6.2.6.1.	Reaction forces (LC6).....	26
6.2.7.	Wind from left (CO1).....	27
6.2.7.1.	Reaction forces (CO1).....	28
6.2.8.	Wind upwards (CO2) .....	29
6.2.8.1.	Reaction forces (CO2).....	30
6.2.9.	Wind downwards (CO3) .....	31
6.2.9.1.	Reaction forces (CO3).....	32
6.2.10.	Wind downwards and roof weights (CO4) .....	33
6.2.10.1.	Reaction forces (CO4).....	34
6.2.11.	Roof weights (CO5).....	35
6.2.11.1.	Reaction forces (CO5).....	36
6.2.12.	Equivalent load (CO6).....	37
6.2.12.1.	Reaction forces (CO6).....	38
6.3.	Reaction forces: Structure is in use ( $q_p = 0.3 \text{ kN/m}^2$ ) .....	39
6.3.1.	Node numbers .....	39
6.3.2.	Own weight (LC1) .....	40
6.3.2.1.	Reaction forces (LC1).....	41
6.3.3.	Wind from left (LC2) .....	42
6.3.3.1.	Reaction forces (LC2).....	43
6.3.4.	Wind Upward (LC3) .....	44
6.3.4.1.	Reaction forces (LC3).....	45
6.3.5.	Wind downward (LC4).....	46
6.3.5.1.	Reaction forces (LC4).....	47
6.3.6.	Roof weight (LC5) .....	48
6.3.6.1.	Reaction forces (LC5).....	49
6.3.7.	Equivalent load (LC6).....	50
6.3.7.1.	Reaction forces (LC6).....	51
6.3.8.	Wind from left (CO1) .....	52
6.3.8.1.	Reaction forces (CO1).....	53

6.3.9.	Wind upwards (CO2) .....	54
6.3.9.1.	Reaction forces (CO2).....	55
6.3.10.	Wind downwards (CO3) .....	56
6.3.10.1.	Reaction forces (CO3).....	57
6.3.11.	Wind downwards and roof weights (CO4) .....	58
6.3.11.1.	Reaction forces (CO4).....	59
6.3.12.	Roof weights (CO5).....	60
6.3.12.1.	Reaction forces (CO5).....	61
6.3.13.	Equivalent load (CO6).....	62
6.3.13.1.	Reaction forces (CO6).....	63

Preliminary Report



## 4. Static analysis

The 3D Finite Element Software, “RFEM by Dlubal”, was used for performing a static analysis.

A 3D model was analysed nonlinearly and according to the second-order theory. The printout RFEM report will be provided upon request.

### 4.1. Standards

- EN 1990-1-1 “Fundamentals of Structural Design and NB”
- EN 1999-1-1 “Aluminium structures”
- EN 13782:2015 “Tents – Safety”
- EN 13814: 2004

### 4.2. Documents

- KM24 - Technical drawing - Area 1 - Isometric view Spanten – 240612
- KM24 - Technical drawing - Area 1 - Plots Spanten - 240612[76]
- KM24 - Technical drawing - Area 1 - Side view Spanten - 240612[36]
- KM24 - Technical drawing - Area 1 - Top view Spanten – 240612
- KM24 - Technical drawing - Area 1 - 240613.DWG
- Overlapping Keinemusik - The Good Guyz.DWG
- Static analysis RFEM software;
  - 240626 Kontent & The Good Guyz Canopy roof \_ qp 0.45 kN/m<sup>2</sup>
  - 240626 Kontent & The Good Guyz Canopy roof \_ qp 0.3 kN/m<sup>2</sup>

## 5. Loads on structure

### 5.1. Own weight

The RFEM software has automatically incorporated the own weight of the components.

### 5.2. Wind loads

**Situation 1:** When the structure is not in use, wind gusts up to a peak wind pressure of 0.450 kN/m<sup>2</sup> is considered.

$q_p(z)$	450 [N/m <sup>2</sup> ]
$V(z)$	26.8      97 [m/s] / [km/h]

	0	II	III	
$v_{b,0}$	15.9	20.0	22.5	[m/s]
	57	72	81	[km/u]
	7	8	9	[Bft]
	kust	onbebouwd	bebouwd	

**Situation 2:** When the structure is in use, wind gusts up to a peak wind pressure of 0.30 kN/m<sup>2</sup> is considered.

$q_p(z)$	300 [N/m <sup>2</sup> ]
$V(z)$	21.9      79 [m/s] / [km/h]

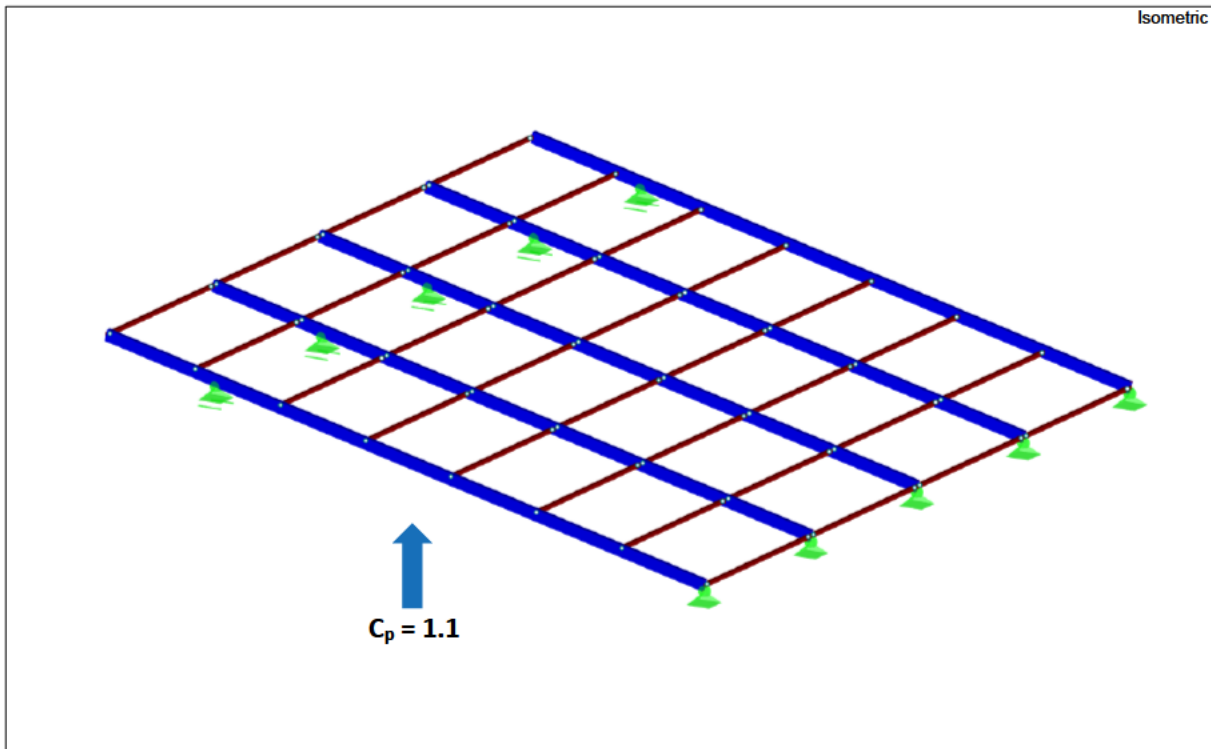
	0	II	III	
$v_{b,0}$	13.0	16.3	18.4	[m/s]
	47	59	66	[km/u]
	6	7	8	[Bft]
	kust	onbebouwd	bebouwd	

### 5.3. Wind pressure coefficients

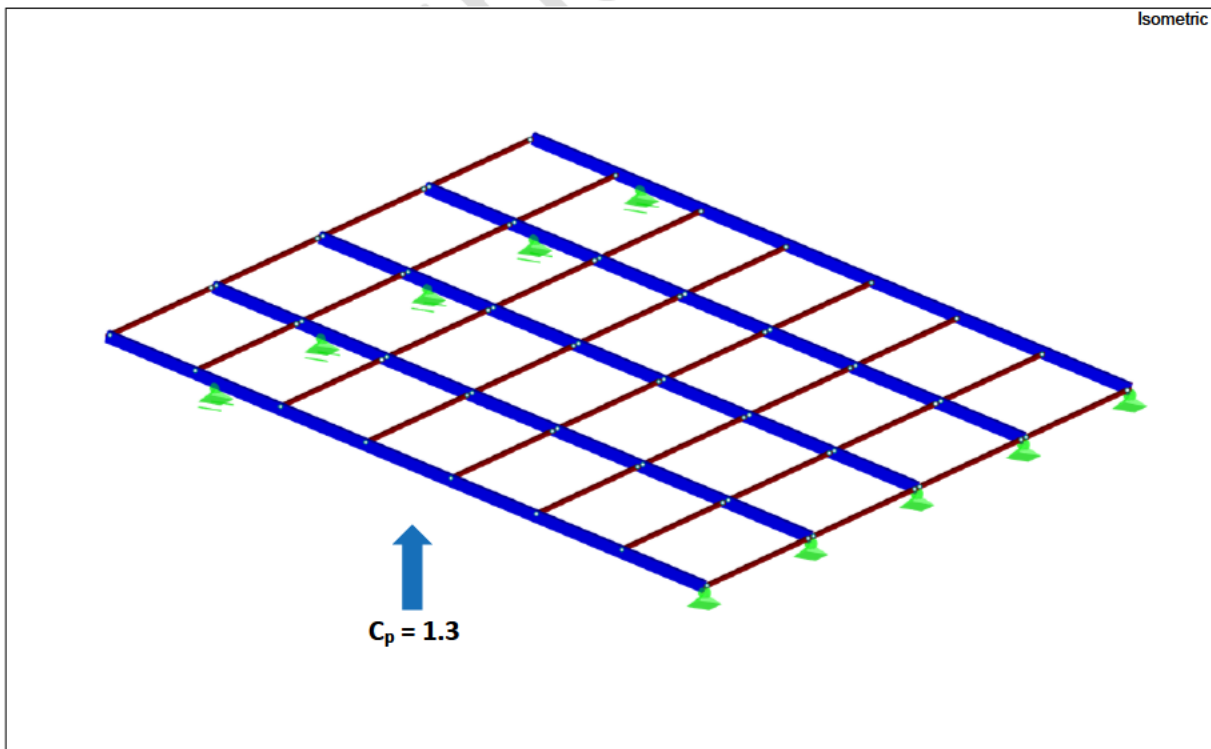
Wind pressure coefficients are applied according to the below scheme (See below pages).

5.3.1. Wind load: Wind upwards (LC3) –  $C_p \times q_p$

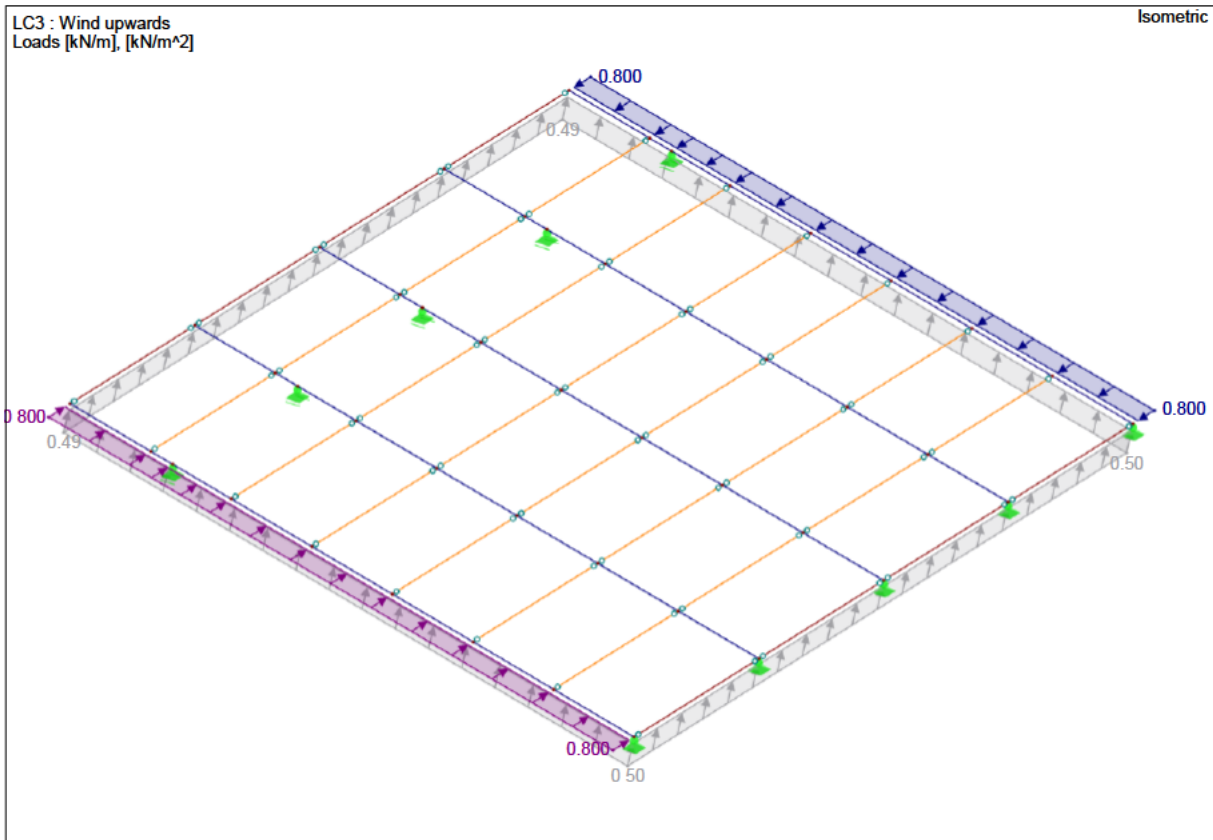
When the structure is not in use, the back wall will be removed during peak wind conditions. Therefore, no wind obstruction is expected, and a  $C_p$  value of 1.1 is chosen for this situation (situation 1).



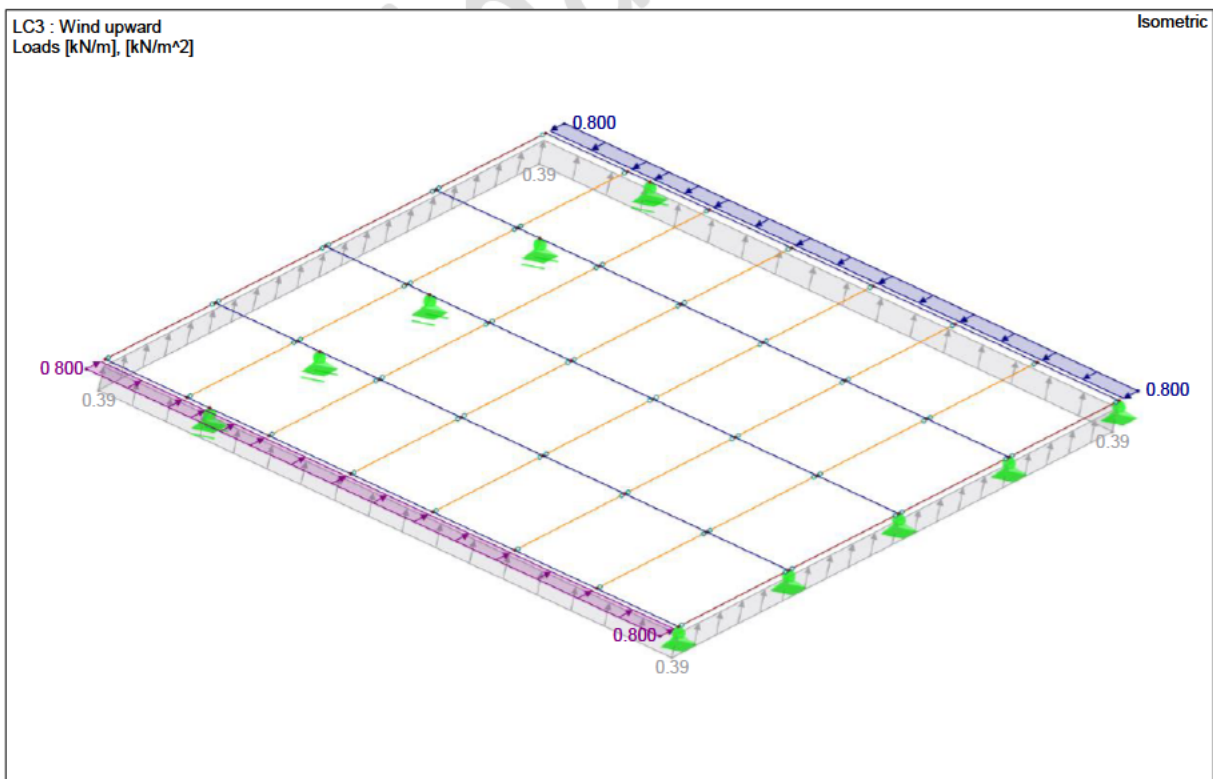
When the structure is in use, the back wall will remain in position. Therefore, wind obstruction is expected, and a  $C_p$  value of 1.3 is chosen for this situation (situation 2).



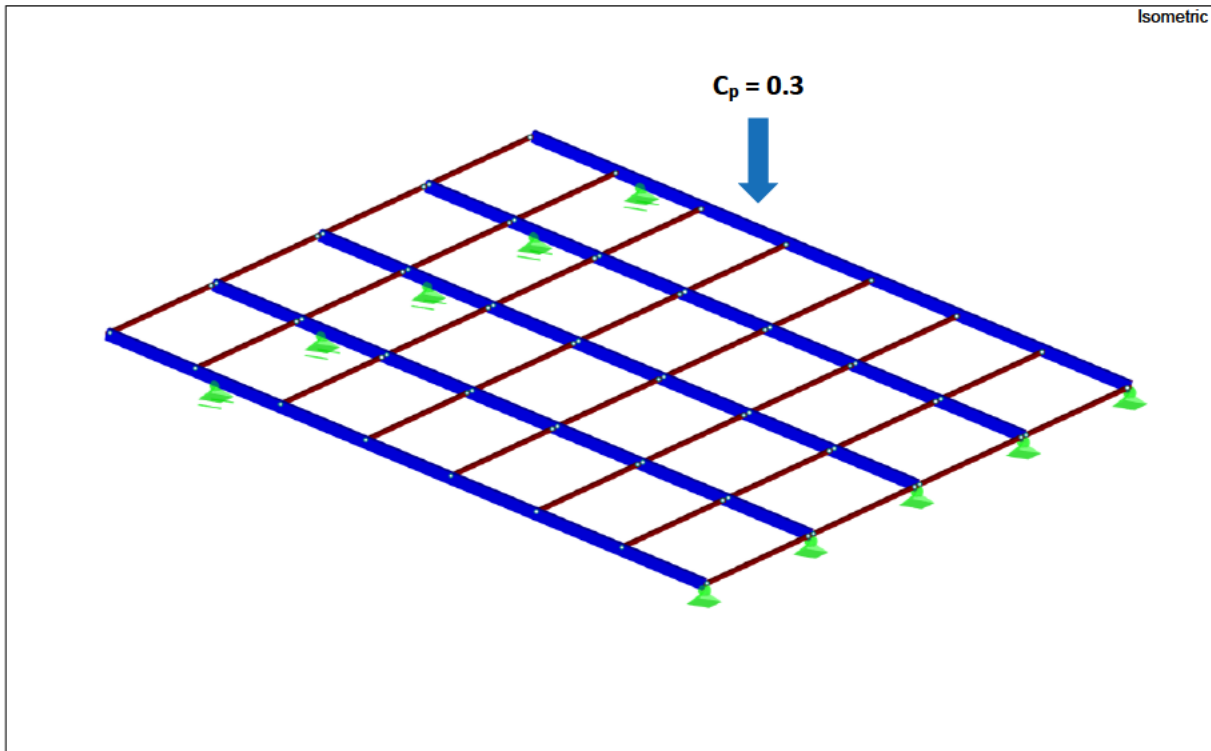
5.3.1.1. Situation 1: Structure is not in use ( $q_p = 0.45 \text{ kN/m}^2$ )



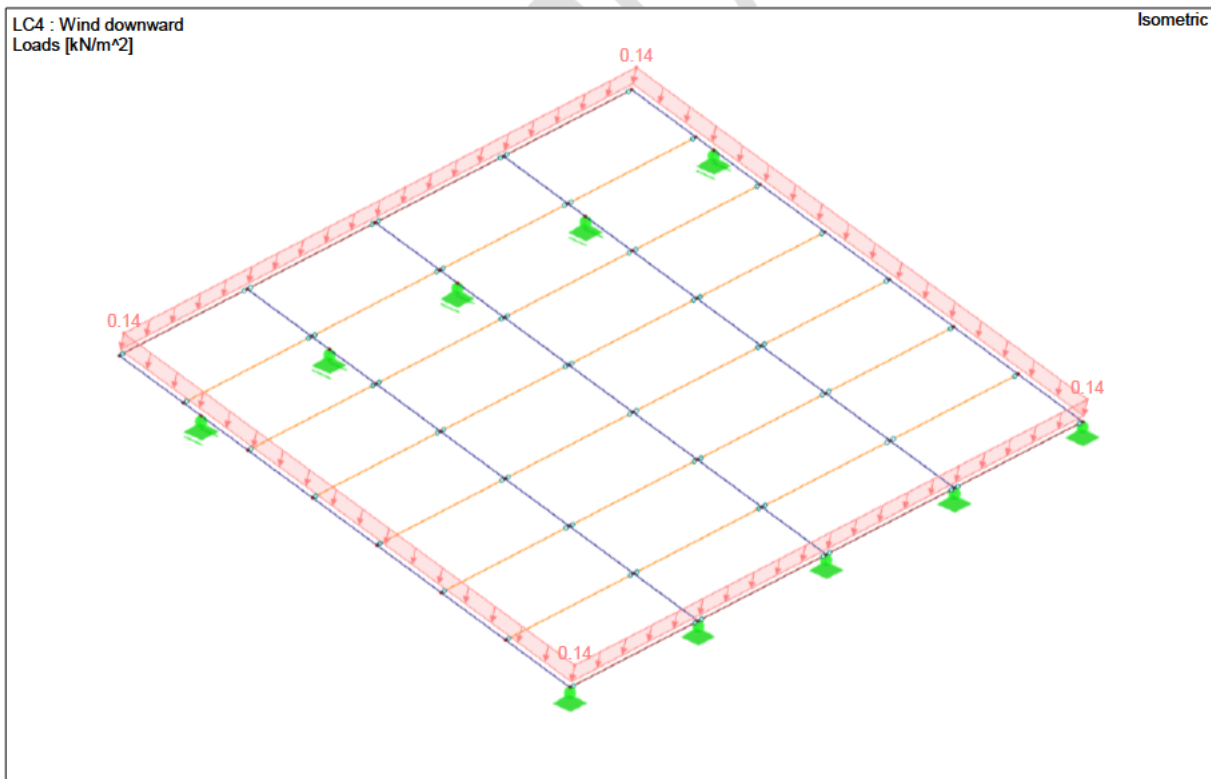
5.3.1.2. Situation 2: Structure is in use ( $q_p = 0.3 \text{ kN/m}^2$ )



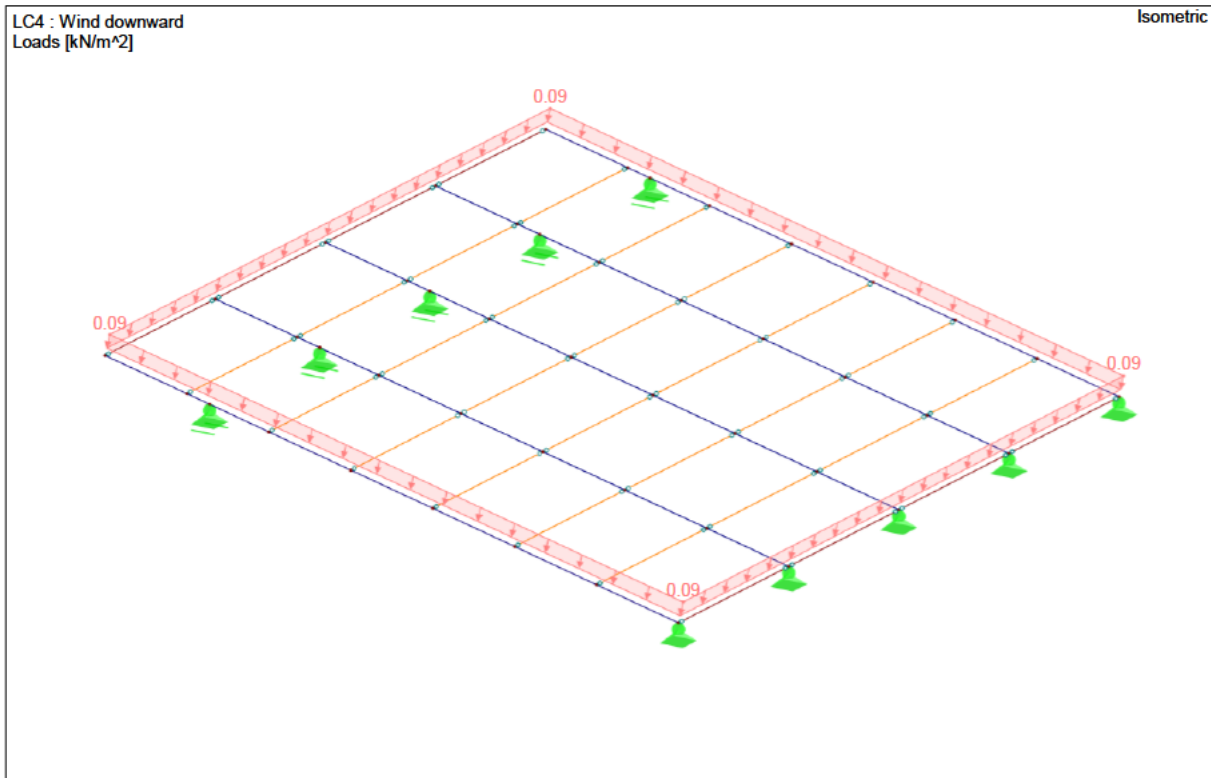
5.3.2. Wind load: Wind downwards (LC4) –  $c_p \times q_p$



5.3.2.1. Situation 1: Structure is not in use ( $q_p = 0.45 \text{ kN/m}^2$ )



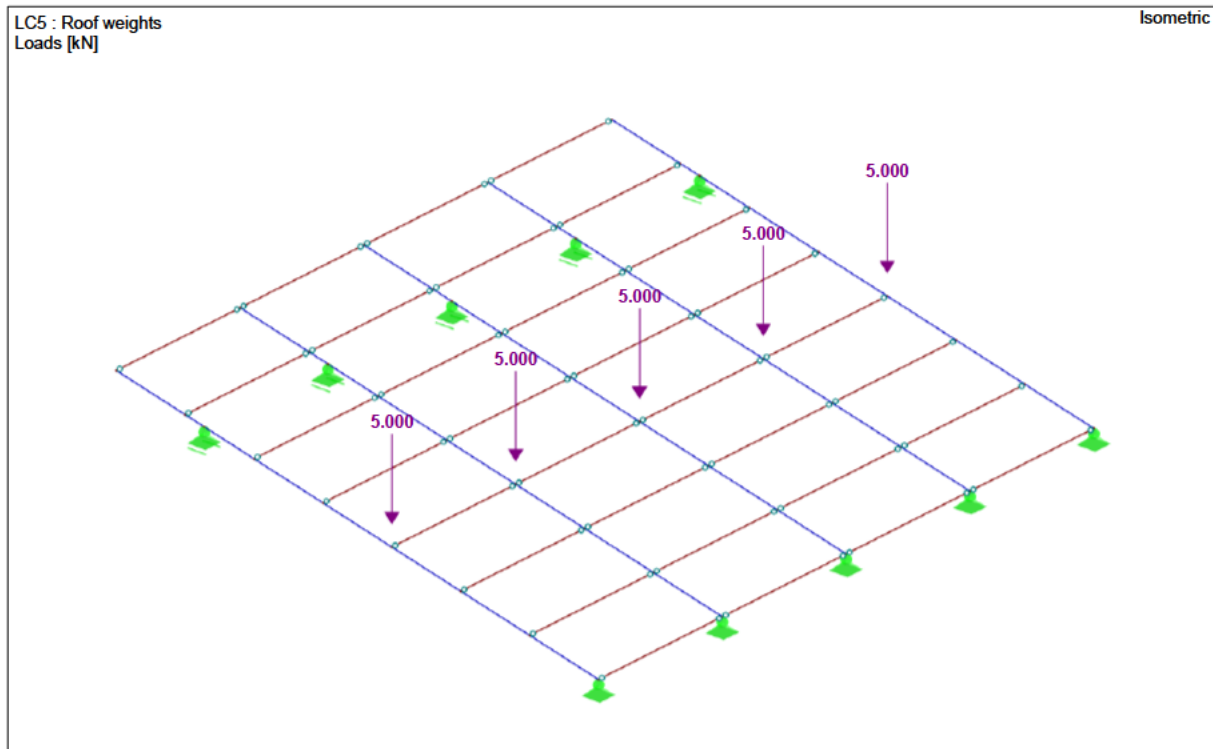
5.3.2.2. Situation 2: Structure is in use ( $q_p = 0.3 \text{ kN/m}^2$ )



Preliminary

#### 5.4. Roof weights

For the preliminary investigation, hanging weights of 500 kg per rafter frame have been applied on the roof.



#### 5.5. Seismic forces

Seismic forces may generally not be conserved because of the flexibility and light weight of the tent. Therefore, seismic forces have not been examined.

#### 5.6. Live loads

This static analysis includes no floors, stairways, landings, ramps, raised floors, or platforms.

#### 5.7. Equivalent load;

The stability is checked with a vertical uniformly distributed equivalent load of  $0.1 \text{ kN/m}^2$  ( $10 \text{ kg/m}^2$ ) on the roof.

#### 5.8. Imperfections

Imperfections have been taken into account by adding an additional load case, "imperfection" according to EN 1993-1-1: 2005-07

## 5.9. Load cases and combinations

### 5.9.1. Load cases

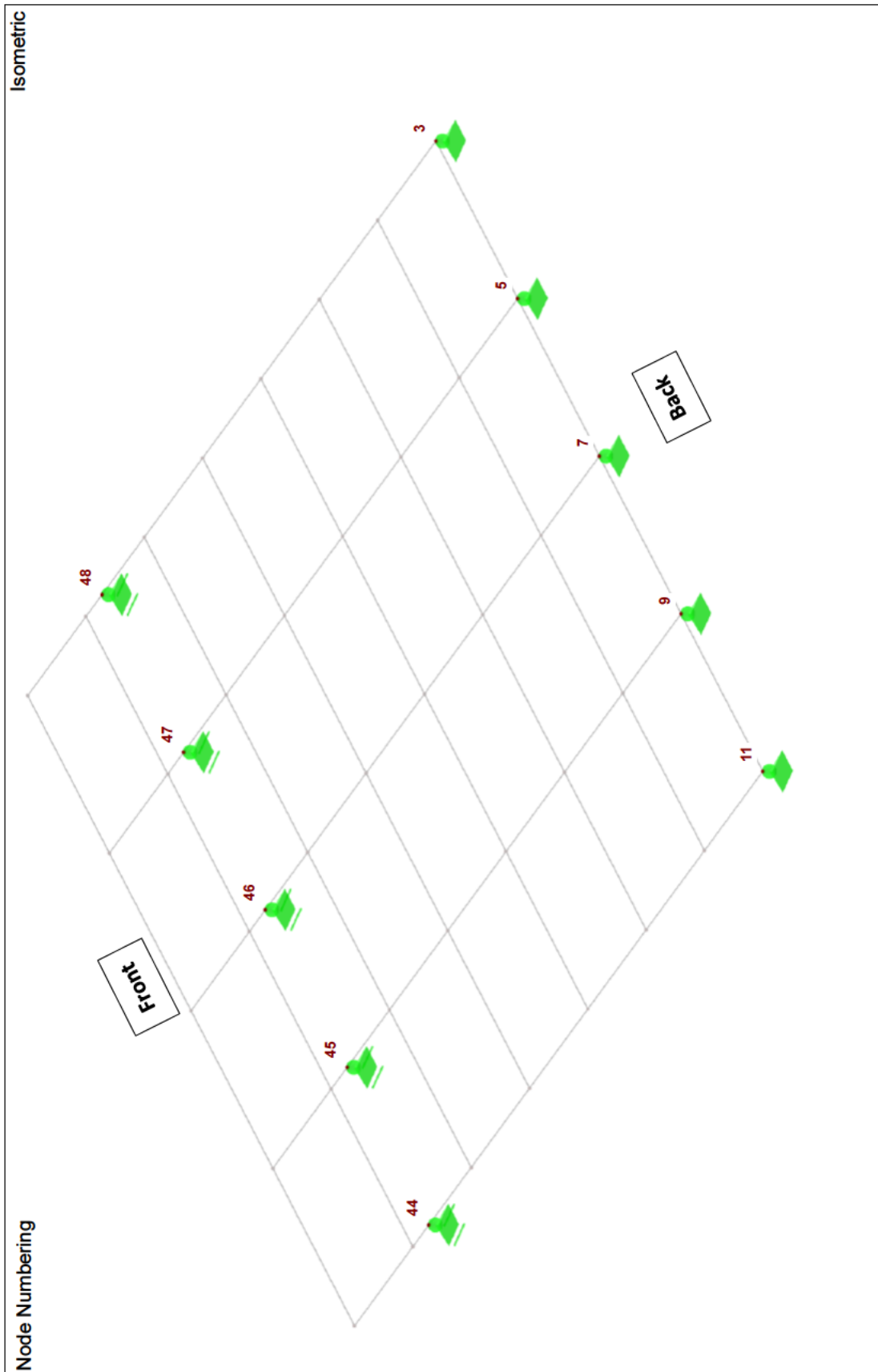
Load Case	Load Case Description	To Solve	EN 1990   CEN Action Category	Self-Weight - Factor in Direction			
				Active	X	Y	Z
LC1	Own weight	+	Permanent	+	0.000	0.000	-1.000
LC2	Wind from left	+	Wind	-	0.000	0.000	0.000
LC3	Wind upwards	+	Wind	-	0.000	0.000	0.000
LC4	Wind downward	+	Wind	-	0.000	0.000	0.000
LC5	Roof weights	+	Permanent/Imposed	-	0.000	0.000	0.000
LC6	Equivalent load	+	Permanent/Imposed	-	0.000	0.000	0.000
LC7	Imperfections	+	Imperfection	-	0.000	0.000	0.000

### 5.9.2. Load combinations

Load Combin.	DS	Load Combination Description	To Solve	LC.1		LC.2		LC.3		LC.4	
				Factor	No.	Factor	No.	Factor	No.	Factor	No.
CO1	0	Wind from left	+	1.350	LC1	1.500	LC2	1.000	LC7		
CO2	0	Wind upwards	+	1.350	LC1	1.500	LC3	1.000	LC7		
CO3	0	Wind downwards	+	1.350	LC1	1.500	LC4	1.000	LC7		
CO4	0	Wind downwards and roof weight	+	1.350	LC1	1.350	LC4	1.350	LC5	1.000	LC7
CO5	0	Roof weight	+	1.350	LC1	1.500	LC5	1.000	LC7		
CO6	0	Equivalent Load	+	1.350	LC1	1.350	LC6	1.000	LC7		

## 6. Reaction forces

### 6.1. Node numbers



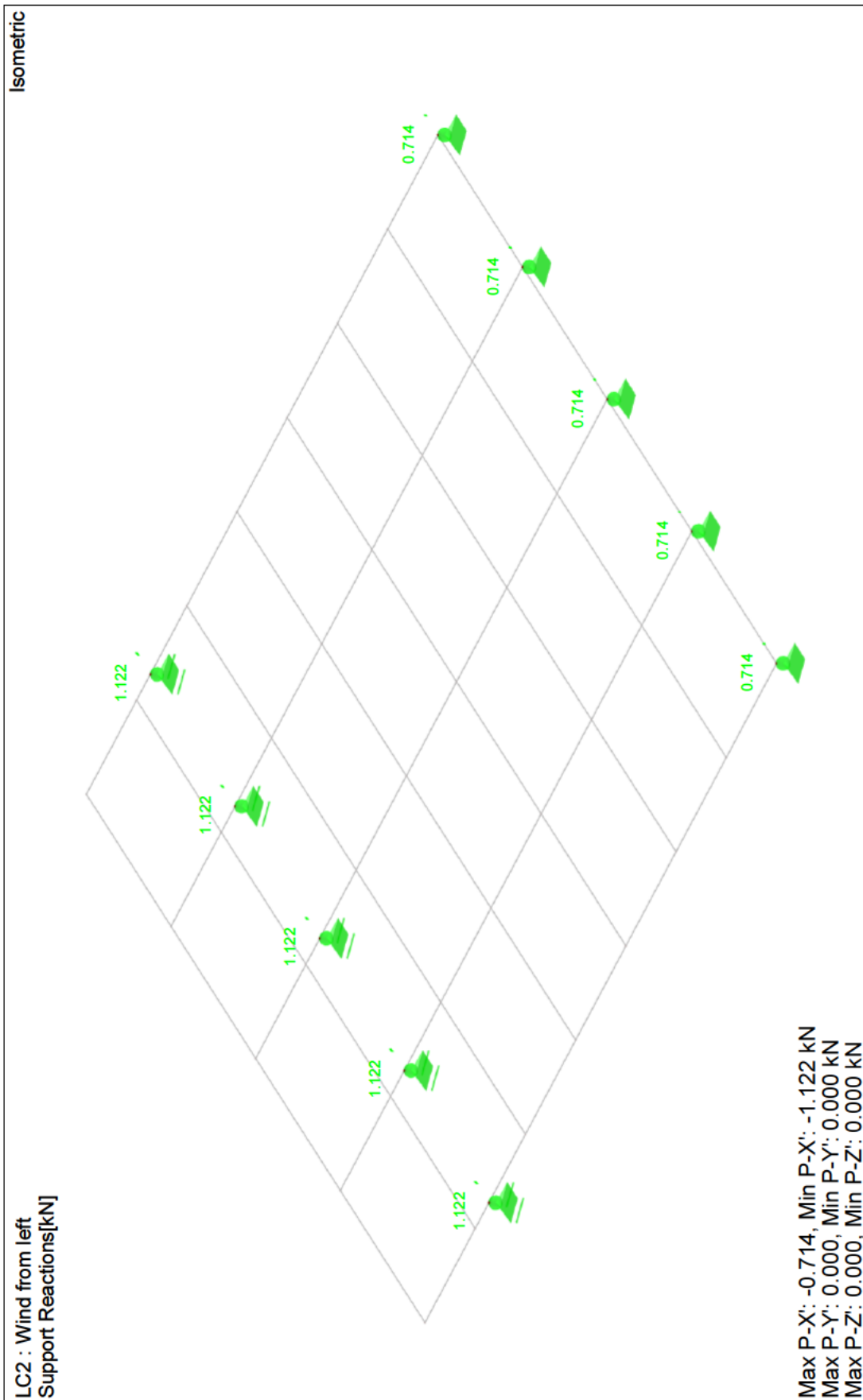


### 6.2.1.1. Reaction forces (LC1)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.032	0.000	-1.088
5	0.000	0.000	-1.312
7	0.000	0.000	-1.312
9	0.000	0.000	-1.312
11	-0.032	0.000	-1.088
44	-0.016	0.000	-1.711
45	-0.007	0.000	-2.065
46	0.000	0.000	-2.064
47	0.007	0.000	-2.065
48	0.016	0.000	-1.711
$\Sigma$ Forces	0.000	0.000	-15.728
$\Sigma$ Loads	0.000	0.000	-15.728

Preliminary Report

6.2.2. Wind from left (LC2)

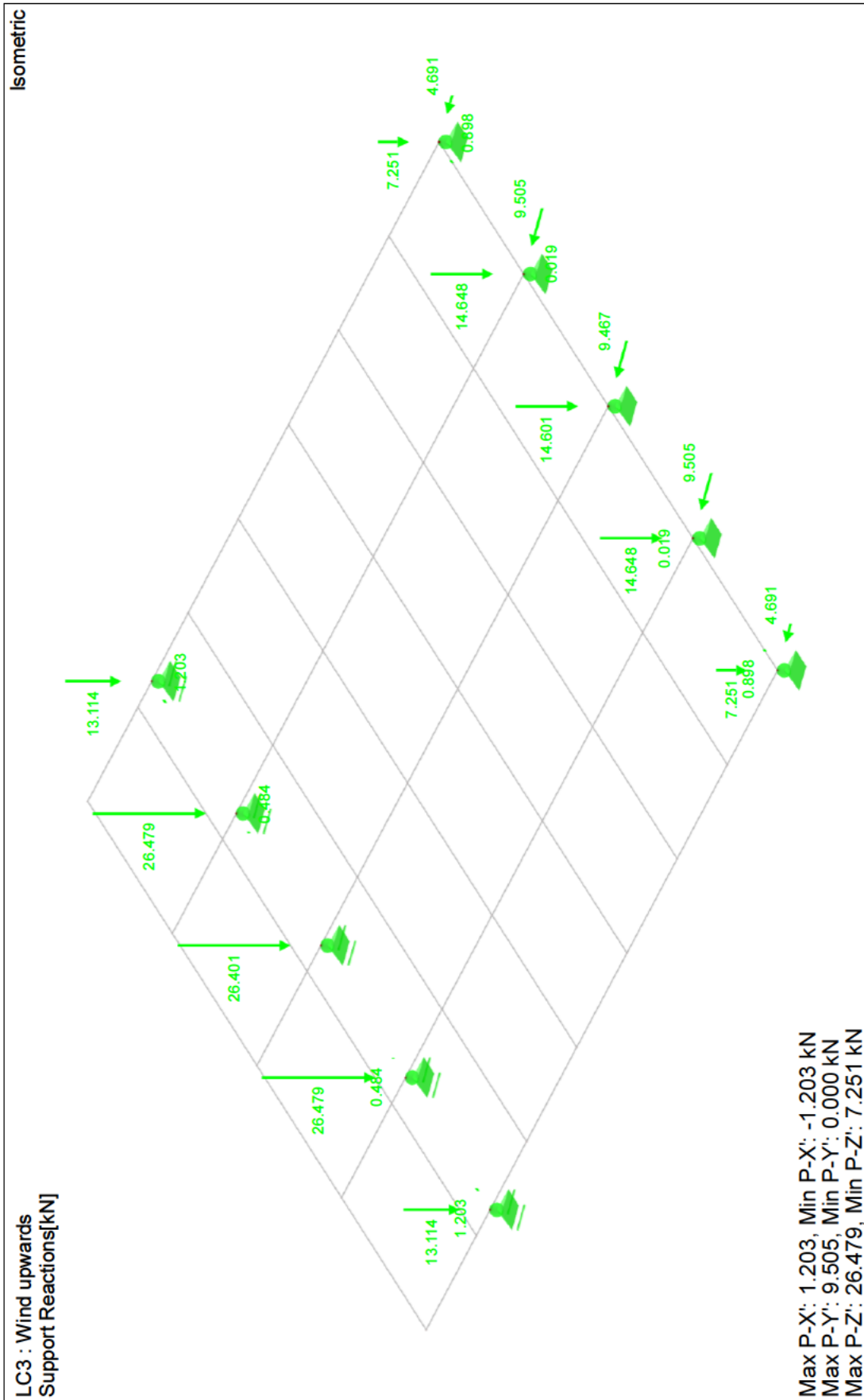


### 6.2.2.1. Reaction forces (LC2)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	-0.714	0.000	0.000
5	-0.714	0.000	0.000
7	-0.714	0.000	0.000
9	-0.714	0.000	0.000
11	-0.714	0.000	0.000
44	-1.122	0.000	0.000
45	-1.122	0.000	0.000
46	-1.122	0.000	0.000
47	-1.122	0.000	0.000
48	-1.122	0.000	0.000
$\Sigma$ Forces	-9.180	0.000	0.000
$\Sigma$ Loads	-9.180	0.000	0.000

Preliminary Report

6.2.3. Wind upwards (LC3)

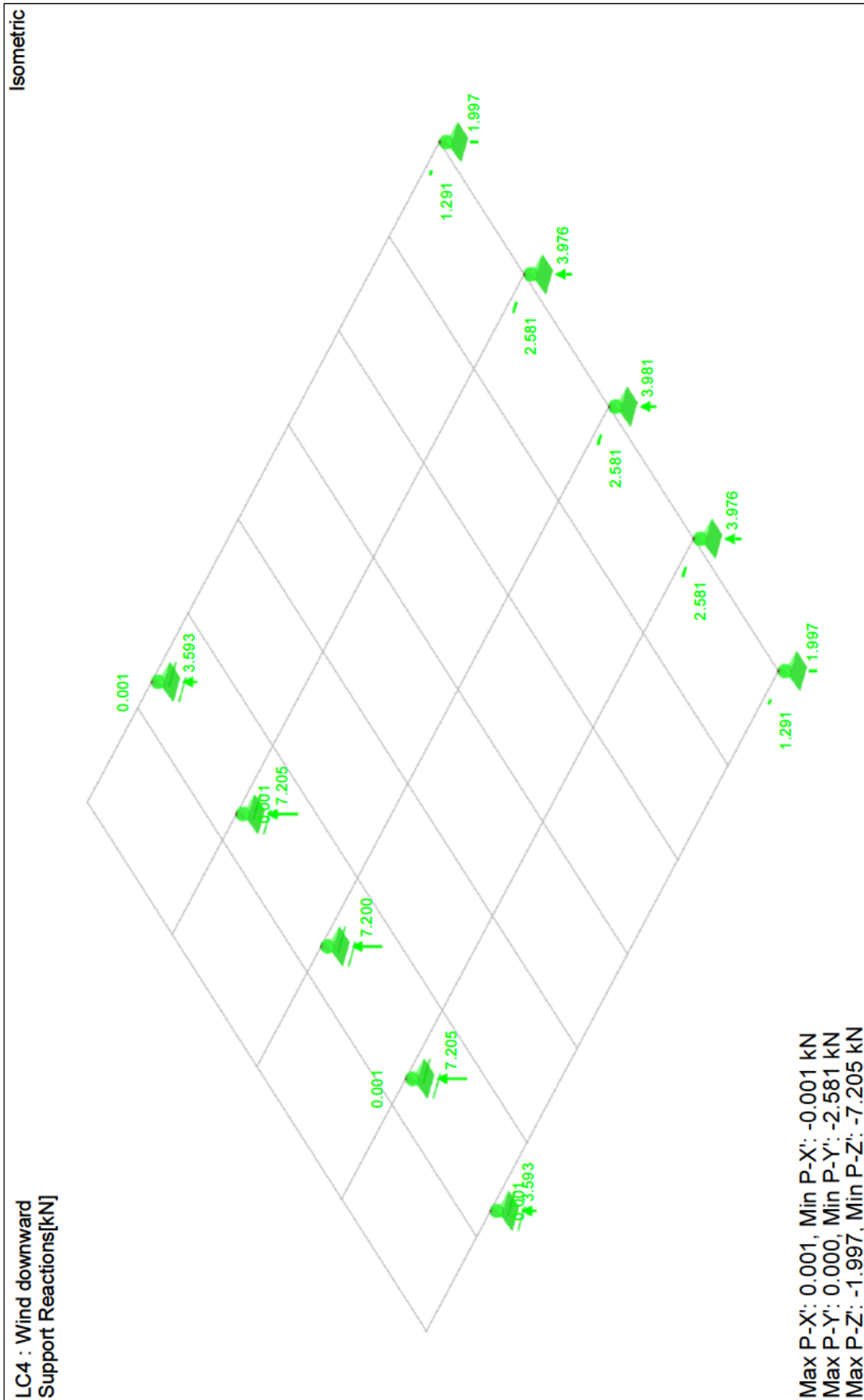


### 6.2.3.1. Reaction forces (LC3)

Node No.	Support Forces [kN]		
	$P_{x'}$	$P_{y'}$	$P_{z'}$
3	0.898	4.691	7.251
5	0.019	9.505	14.648
7	0.000	9.467	14.601
9	-0.019	9.505	14.648
11	-0.898	4.691	7.251
44	-1.203	0.000	13.114
45	-0.484	0.000	26.479
46	0.000	0.000	26.401
47	0.484	0.000	26.479
48	1.203	0.000	13.114
$\Sigma$ Forces	0.000	37.859	163.985
$\Sigma$ Loads	0.000	37.859	163.985

Preliminary Report

6.2.4. Wind downwards (LC4)

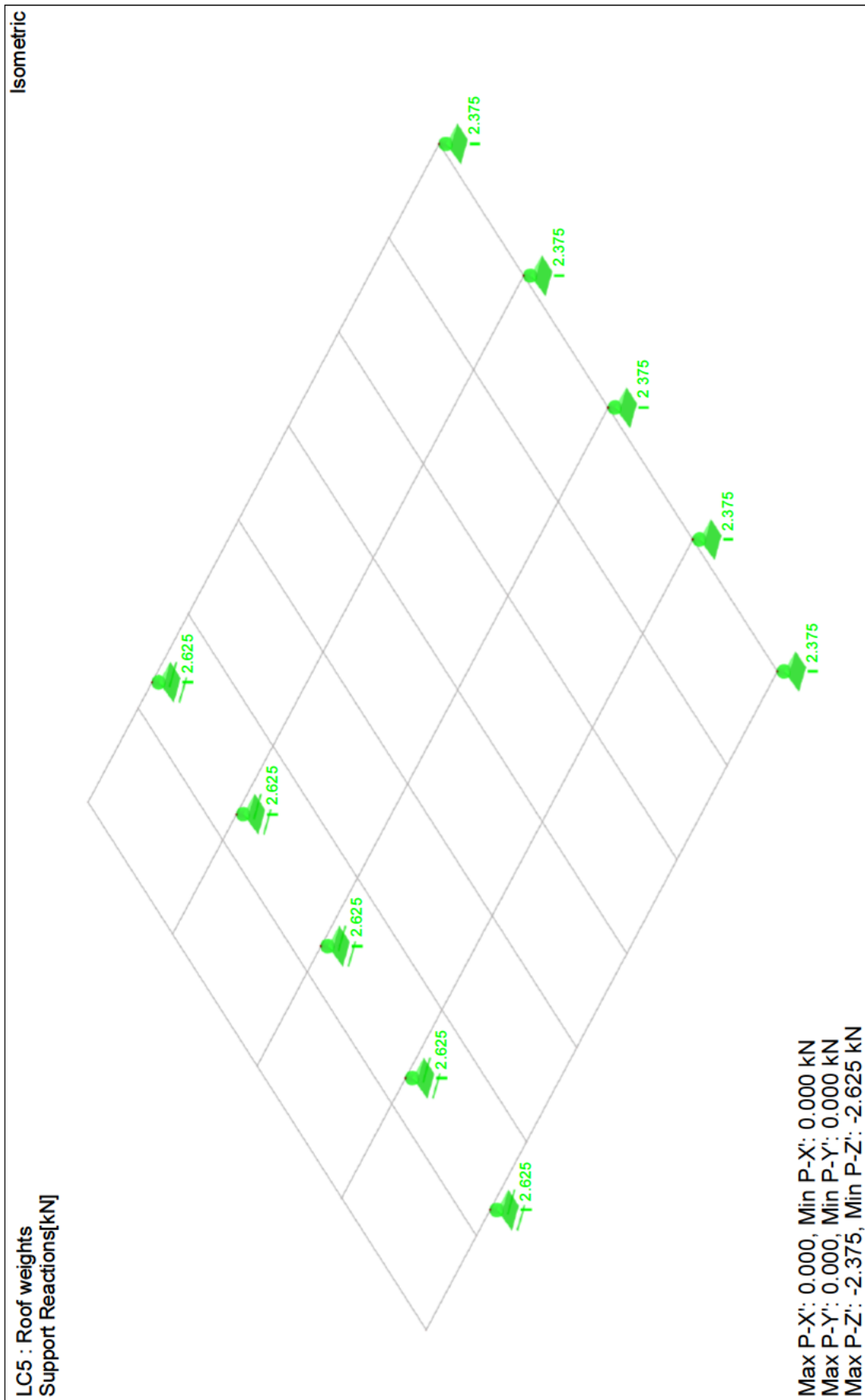


#### 6.2.4.1. Reaction forces (LC4)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.000	-1.291	-1.997
5	0.000	-2.581	-3.976
7	0.000	-2.581	-3.981
9	0.000	-2.581	-3.976
11	0.000	-1.291	-1.997
44	0.001	0.000	-3.593
45	-0.001	0.000	-7.205
46	0.000	0.000	-7.200
47	0.001	0.000	-7.205
48	-0.001	0.000	-3.593
$\Sigma$ Forces	0.000	-10.325	-44.724
$\Sigma$ Loads	0.000	-10.325	-44.724

Preliminary Report

6.2.5. Roof weights (LC5)

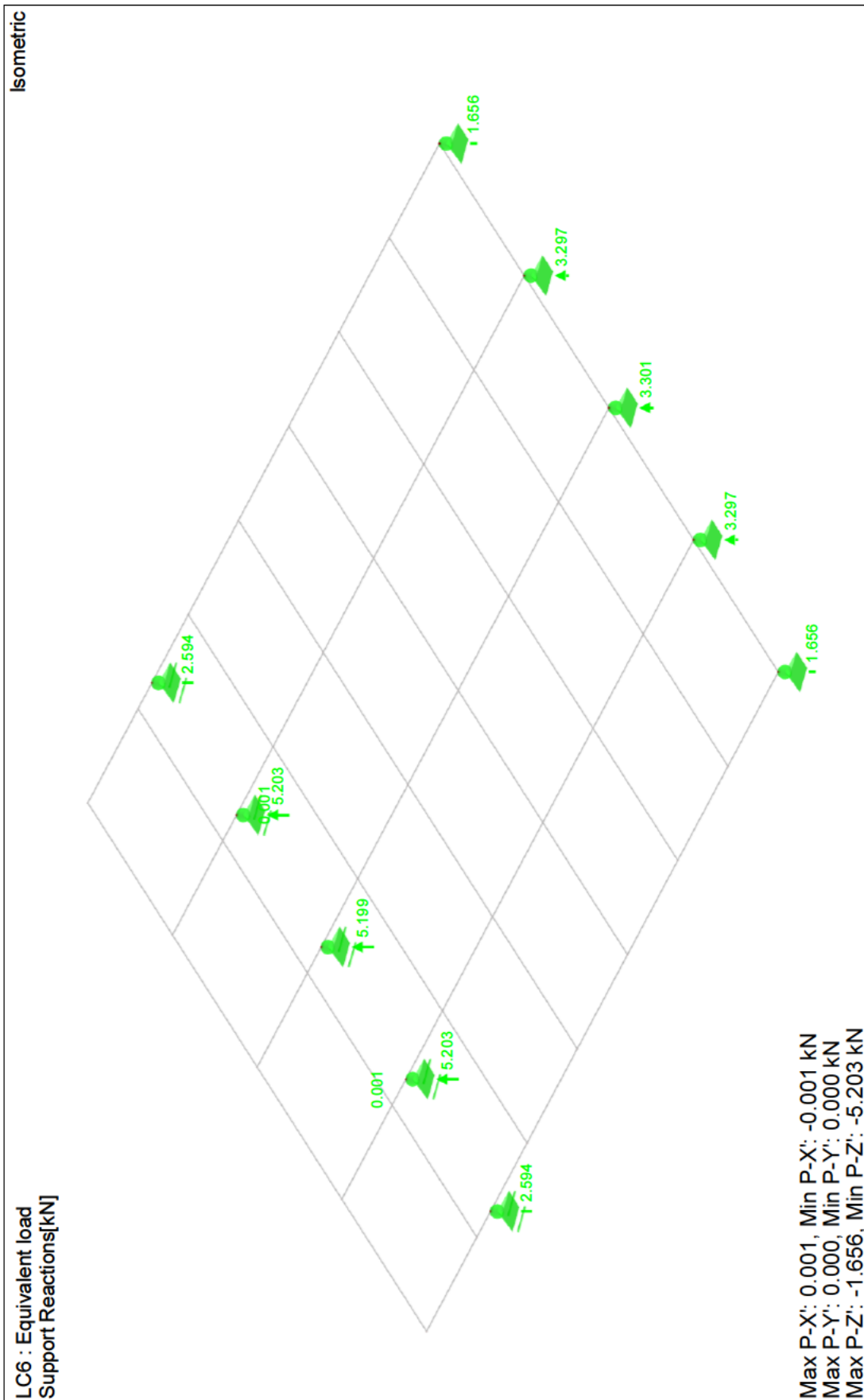


### 6.2.5.1. Reaction forces (LC5)

Node No.	Support Forces [kN]		
	$P_{x'}$	$P_{y'}$	$P_{z'}$
3	0.000	0.000	-2.375
5	0.000	0.000	-2.375
7	0.000	0.000	-2.375
9	0.000	0.000	-2.375
11	0.000	0.000	-2.375
44	0.000	0.000	-2.625
45	0.000	0.000	-2.625
46	0.000	0.000	-2.625
47	0.000	0.000	-2.625
48	0.000	0.000	-2.625
$\Sigma$ Forces	0.000	0.000	-25.000
$\Sigma$ Loads	0.000	0.000	-25.000

Preliminary Report

6.2.6. Equivalent load (LC6)



### 6.2.6.1. Reaction forces (LC6)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.000	0.000	-1.656
5	0.000	0.000	-3.297
7	0.000	0.000	-3.301
9	0.000	0.000	-3.297
11	0.000	0.000	-1.656
44	0.000	0.000	-2.594
45	-0.001	0.000	-5.203
46	0.000	0.000	-5.199
47	0.001	0.000	-5.203
48	0.000	0.000	-2.594
$\Sigma$ Forces	0.000	0.000	-34.000
$\Sigma$ Loads	0.000	0.000	-34.000

Preliminary Report

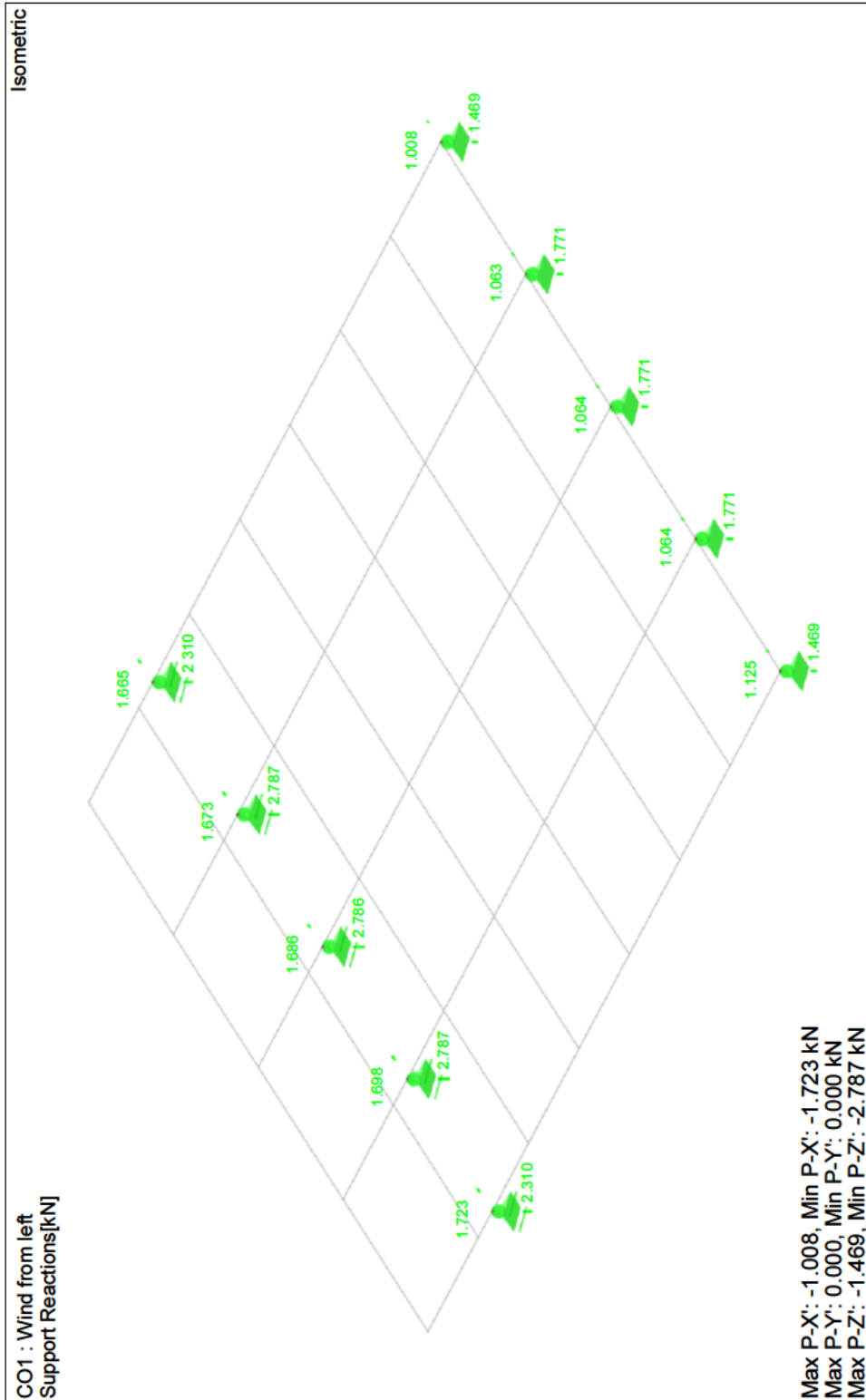
### 6.2.7. Wind from left (CO1)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind from left = 1.5

Imperfection = 1.0



### 6.2.7.1. Reaction forces (CO1)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	-1.008	0.000	-1.469
5	-1.063	0.000	-1.771
7	-1.064	0.000	-1.771
9	-1.064	0.000	-1.771
11	-1.125	0.000	-1.469
44	-1.723	0.000	-2.310
45	-1.698	0.000	-2.787
46	-1.686	0.000	-2.786
47	-1.673	0.000	-2.787
48	-1.665	0.000	-2.310
$\Sigma$ Forces	-13.770	0.000	-21.233
$\Sigma$ Loads	-13.770	0.000	-21.233

Preliminary Report

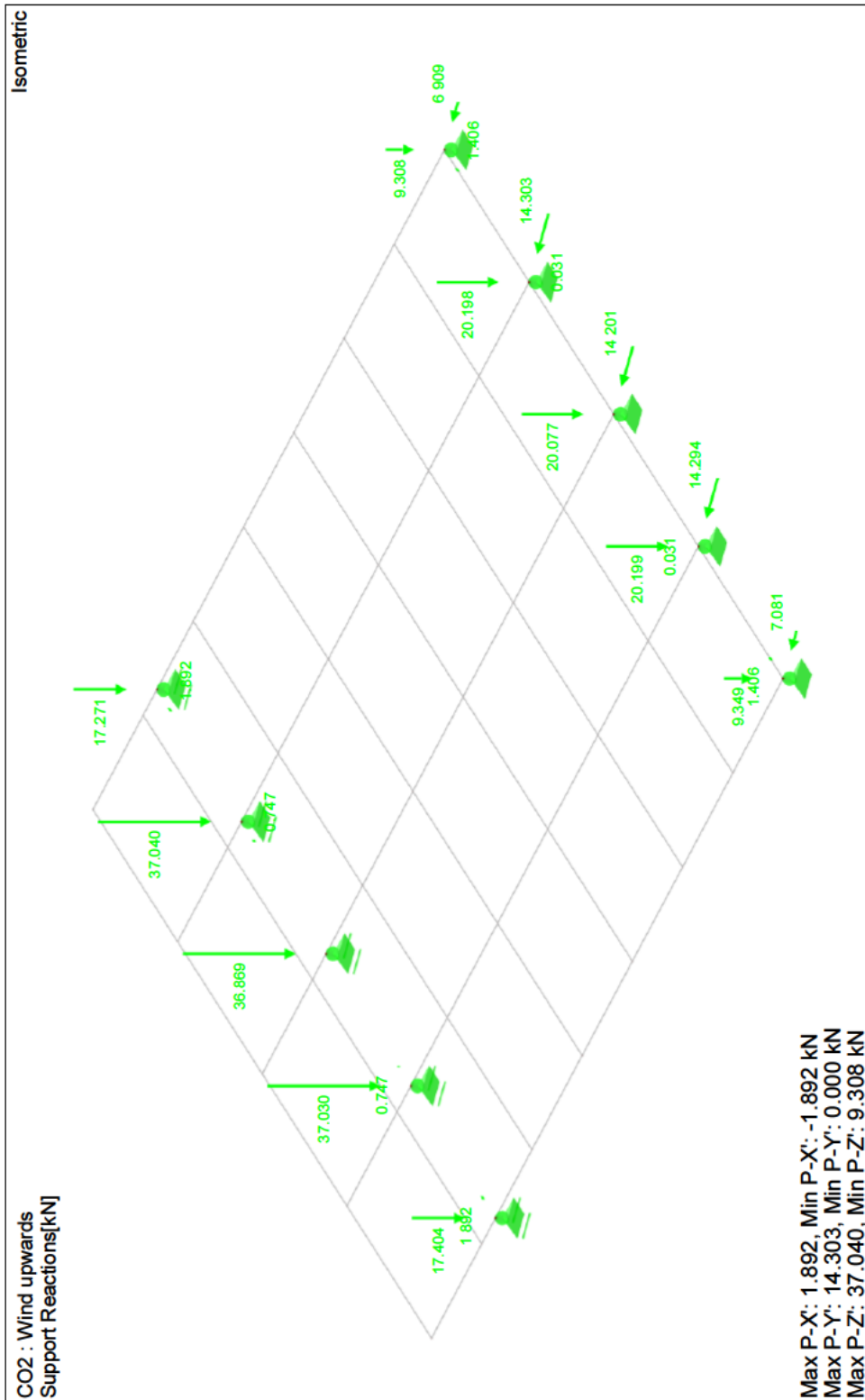
6.2.8. Wind upwards (CO2)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind upwards = 1.5

Imperfection = 1.0



### 6.2.8.1. Reaction forces (CO<sub>2</sub>)

Node No.	Support Forces [kN]		
	P <sub>X'</sub>	P <sub>Y'</sub>	P <sub>Z'</sub>
3	1.406	6.909	9.308
5	0.031	14.303	20.198
7	0.000	14.201	20.077
9	-0.031	14.294	20.199
11	-1.406	7.081	9.349
44	-1.892	0.000	17.404
45	-0.747	0.000	37.030
46	0.000	0.000	36.869
47	0.747	0.000	37.040
48	1.892	0.000	17.271
Σ Forces	0.000	56.788	224.743
Σ Loads	0.000	56.788	224.743

Preliminary Report

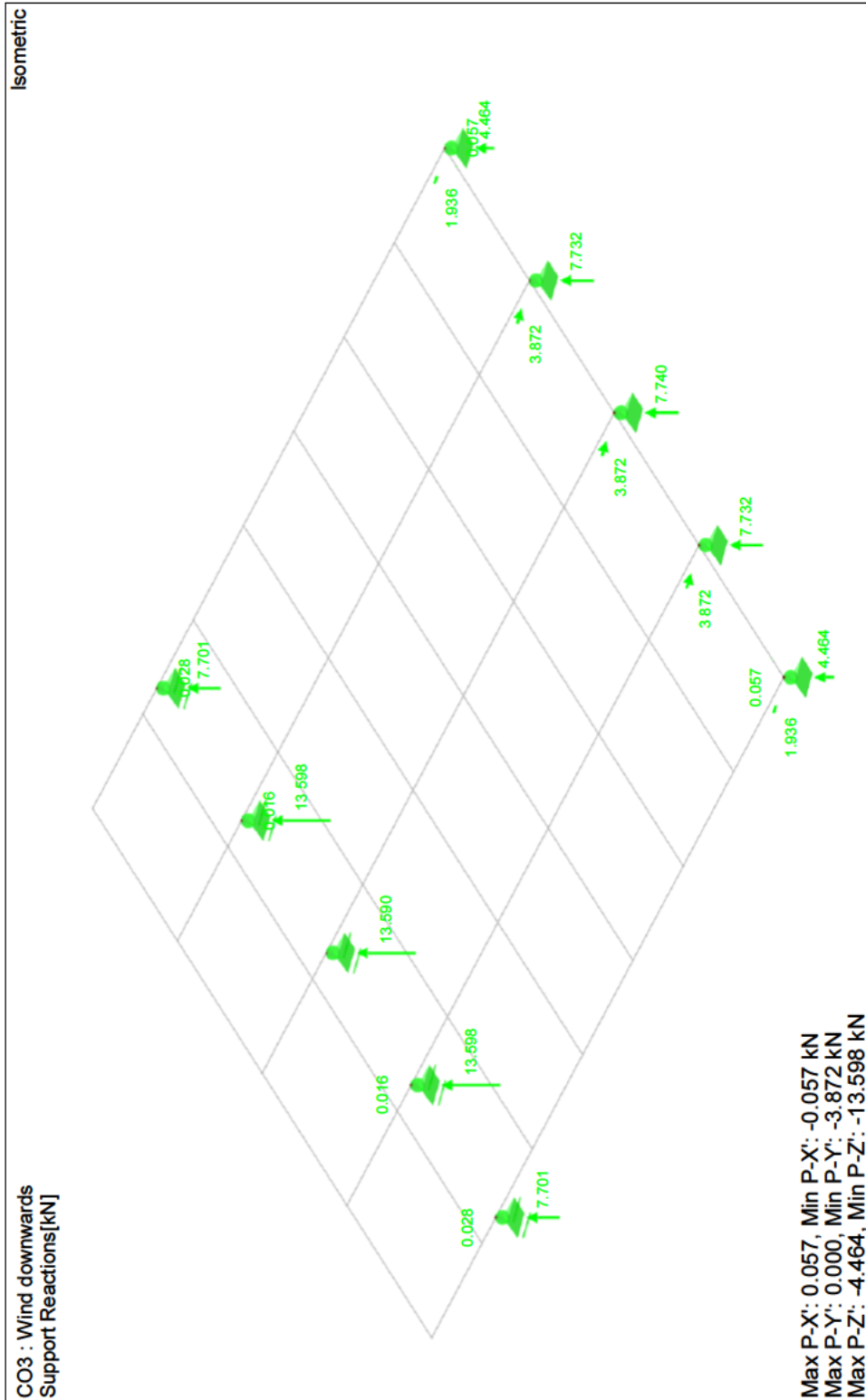
6.2.9. Wind downwards (CO3)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind downwards = 1.5

Imperfection = 1.0



### 6.2.9.1. Reaction forces (CO3)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.057	-1.936	-4.464
5	0.000	-3.872	-7.732
7	0.000	-3.872	-7.740
9	0.000	-3.872	-7.732
11	-0.057	-1.936	-4.464
44	-0.028	0.000	-7.701
45	-0.016	0.000	-13.598
46	0.000	0.000	-13.590
47	0.016	0.000	-13.598
48	0.028	0.000	-7.701
$\Sigma$ Forces	0.000	-15.488	-88.318
$\Sigma$ Loads	0.000	-15.488	-88.318

Preliminary Report

### 6.2.10. Wind downwards and roof weights (CO4)

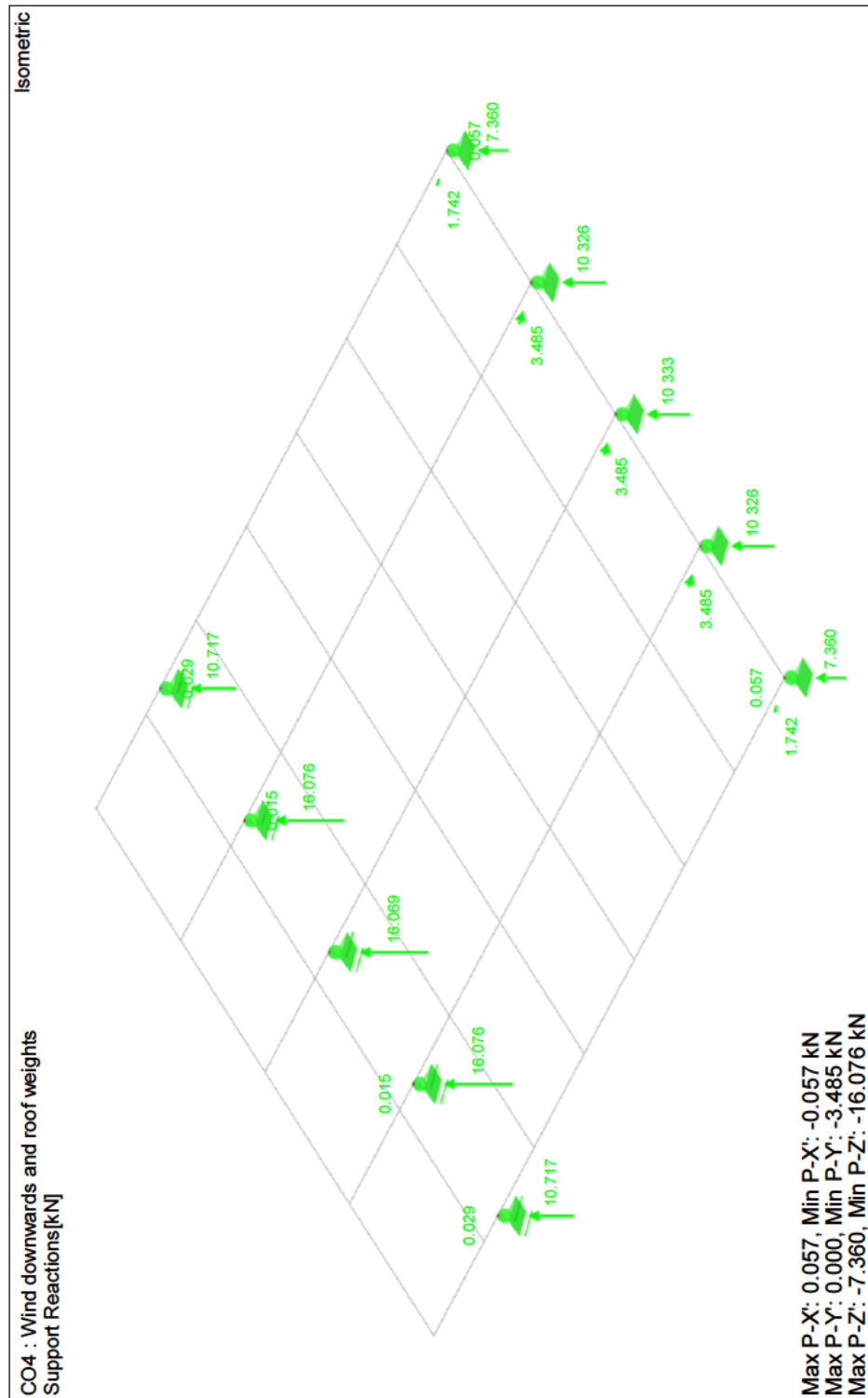
Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind downwards = 1.35

Roof weights = 1.35

Imperfection = 1.0



### 6.2.10.1. Reaction forces (CO4)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.057	-1.742	-7.360
5	0.000	-3.485	-10.326
7	0.000	-3.485	-10.333
9	0.000	-3.485	-10.326
11	-0.057	-1.742	-7.360
44	-0.029	0.000	-10.717
45	-0.015	0.000	-16.076
46	0.000	0.000	-16.069
47	0.015	0.000	-16.076
48	0.029	0.000	-10.717
$\Sigma$ Forces	0.000	-13.939	-115.360
$\Sigma$ Loads	0.000	-13.939	-115.360

Preliminary Report

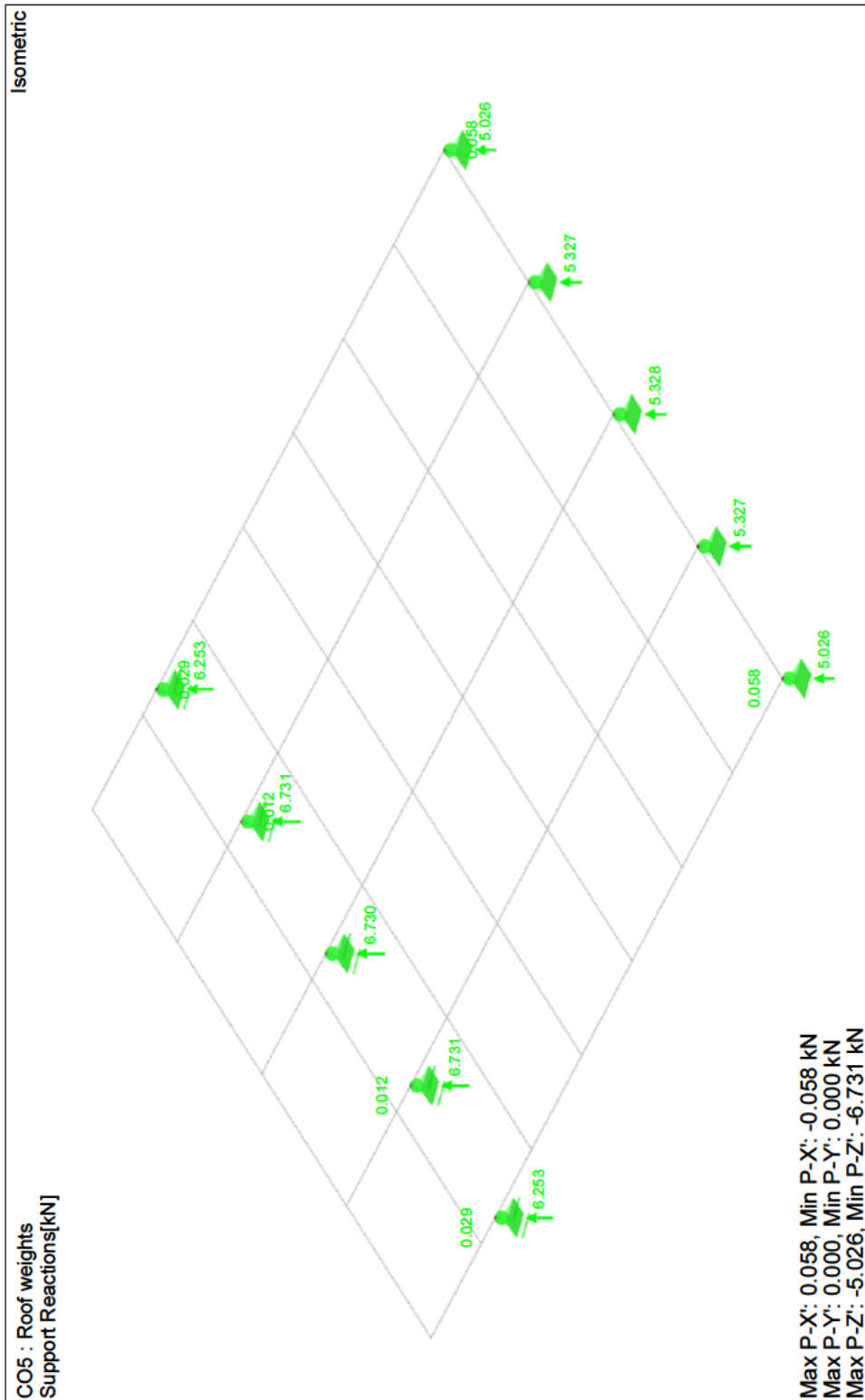
### 6.2.11. Roof weights (CO5)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Roof weights = 1.5

Imperfection = 1.0



### 6.2.11.1. Reaction forces (CO5)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.058	0.000	-5.026
5	0.000	0.000	-5.327
7	0.000	0.000	-5.328
9	0.000	0.000	-5.327
11	-0.058	0.000	-5.026
44	-0.029	0.000	-6.253
45	-0.012	0.000	-6.731
46	0.000	0.000	-6.730
47	0.012	0.000	-6.731
48	0.029	0.000	-6.253
$\Sigma$ Forces	0.000	0.000	-58.733
$\Sigma$ Loads	0.000	0.000	-58.733

Preliminary Report

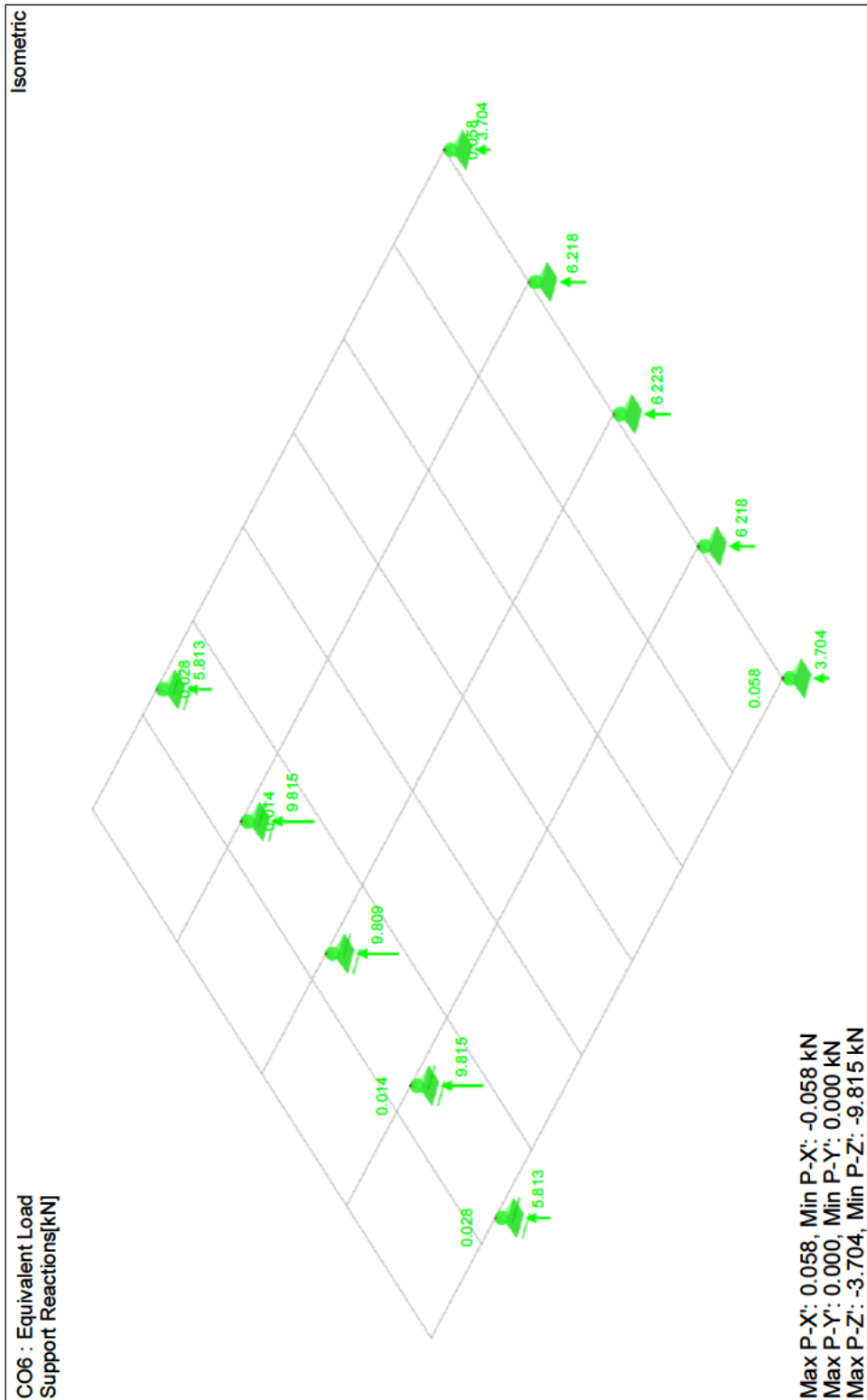
### 6.2.12. Equivalent load (CO6)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Equivalent load = 1.35

Imperfection = 1.0



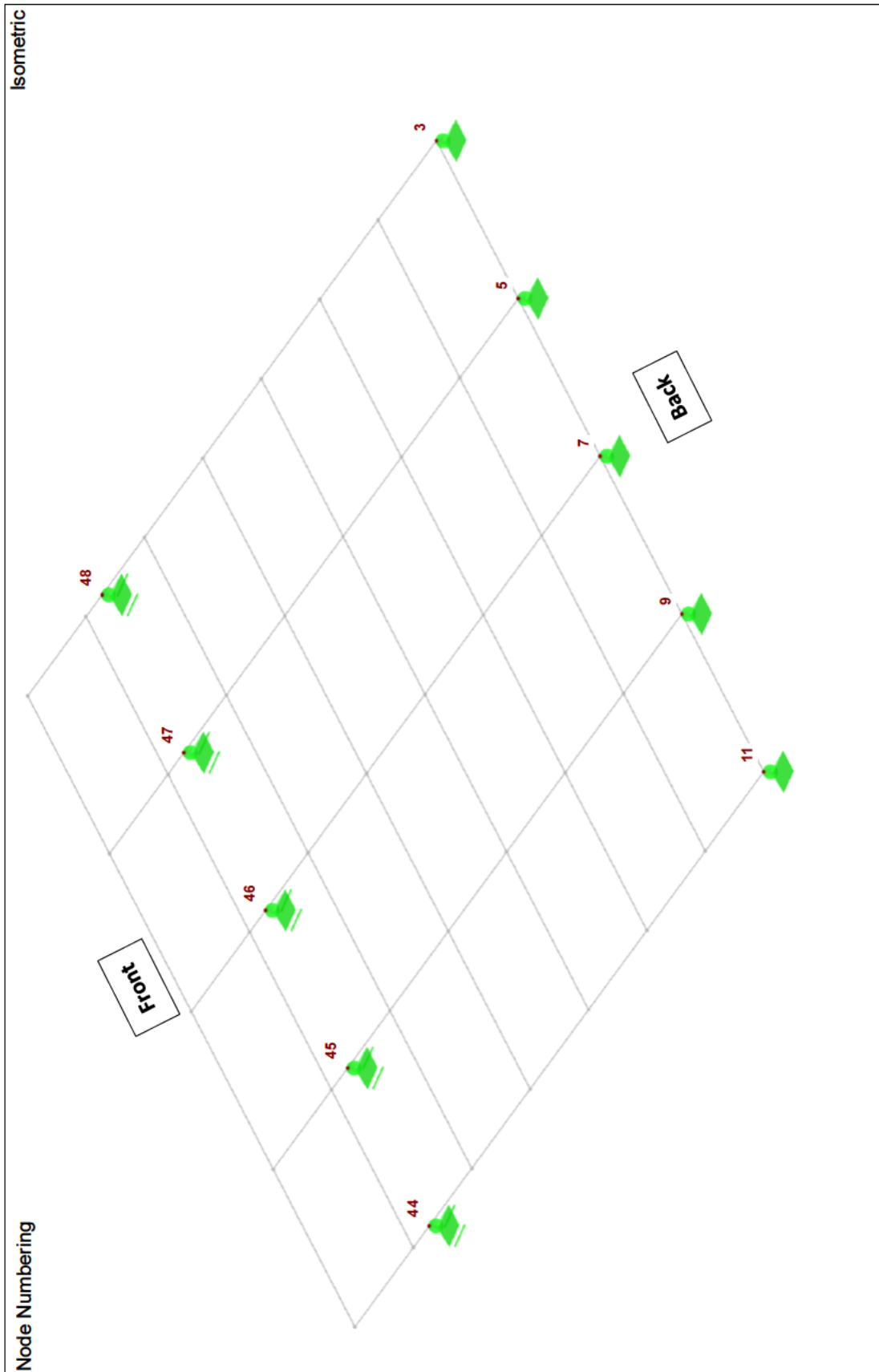
### 6.2.12.1. Reaction forces (CO6)

Node No.	Support Forces [kN]		
	$P_{x'}$	$P_{y'}$	$P_{z'}$
3	0.058	0.000	-3.704
5	0.000	0.000	-6.218
7	0.000	0.000	-6.223
9	0.000	0.000	-6.218
11	-0.058	0.000	-3.704
44	-0.028	0.000	-5.813
45	-0.014	0.000	-9.815
46	0.000	0.000	-9.809
47	0.014	0.000	-9.815
48	0.028	0.000	-5.813
$\Sigma$ Forces	0.000	0.000	-67.133
$\Sigma$ Loads	0.000	0.000	-67.133

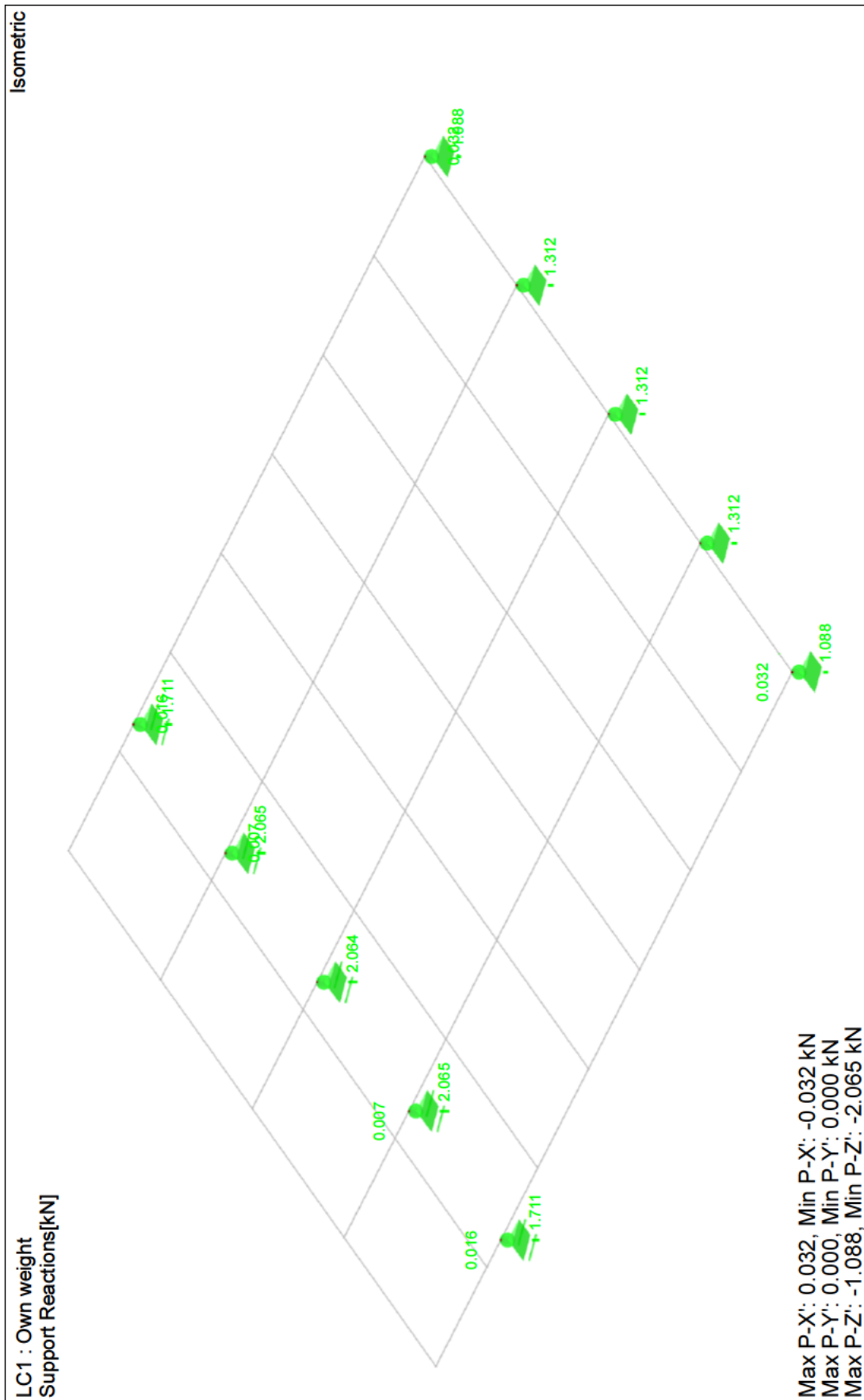
Preliminary Report

6.3. Reaction forces: Structure is in use ( $q_p = 0.3 \text{ kN/m}^2$ )

6.3.1. Node numbers



6.3.2. Own weight (LC1)

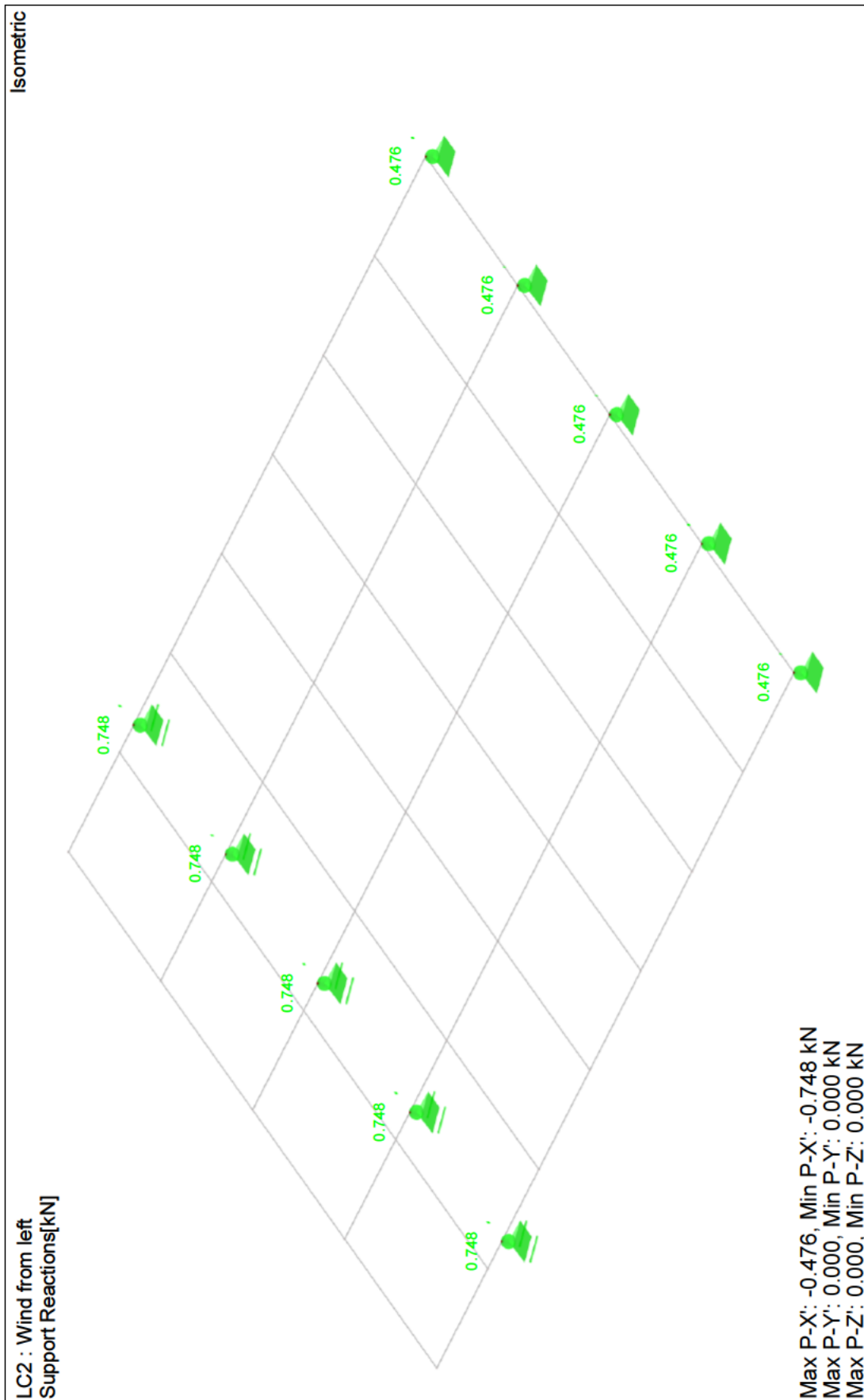


### 6.3.2.1. Reaction forces (LC1)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.032	0.000	-1.088
5	0.000	0.000	-1.312
7	0.000	0.000	-1.312
9	0.000	0.000	-1.312
11	-0.032	0.000	-1.088
44	-0.016	0.000	-1.711
45	-0.007	0.000	-2.065
46	0.000	0.000	-2.064
47	0.007	0.000	-2.065
48	0.016	0.000	-1.711
$\Sigma$ Forces	0.000	0.000	-15.728
$\Sigma$ Loads	0.000	0.000	-15.728

Preliminary Report

6.3.3. Wind from left (LC2)

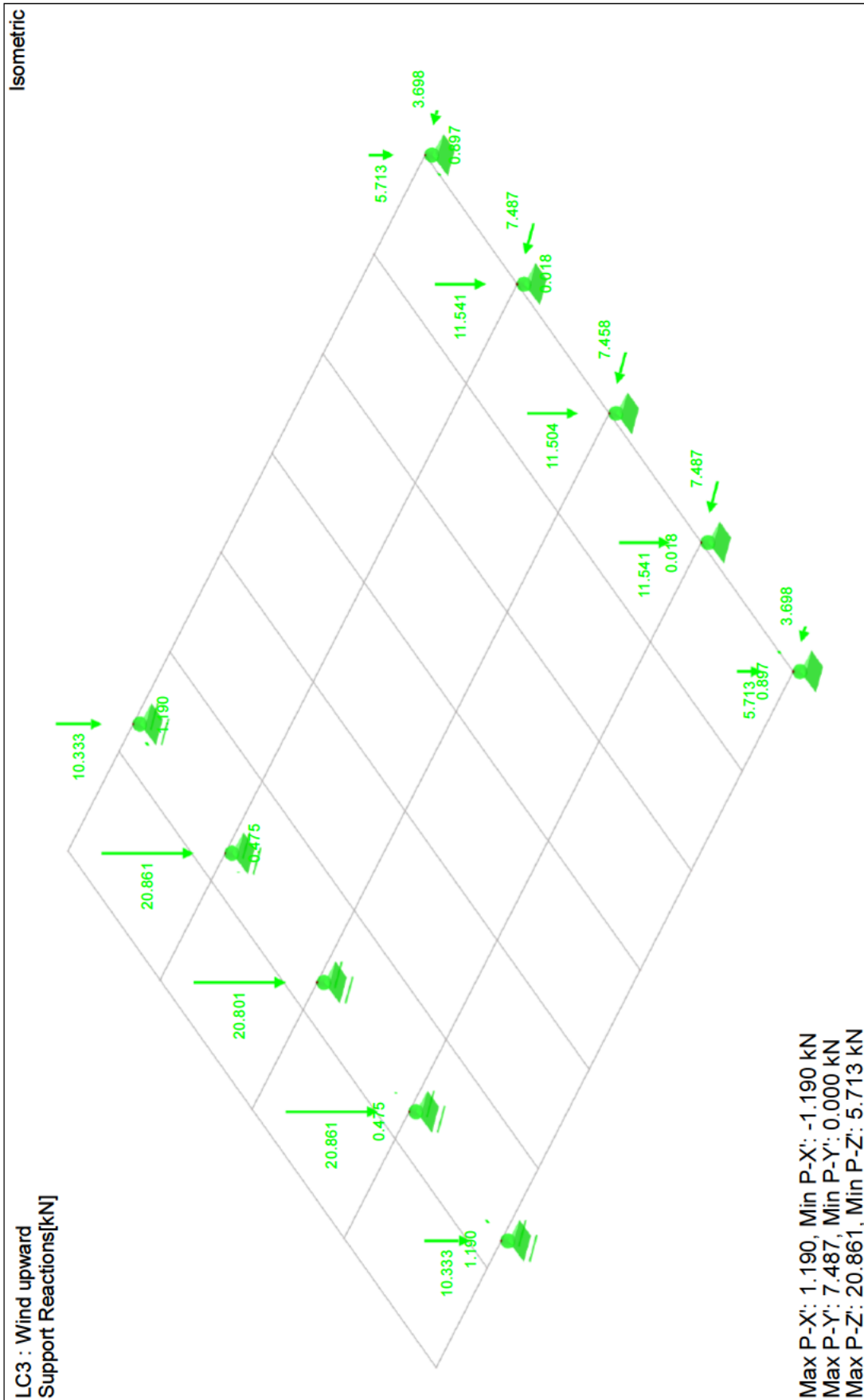


### 6.3.3.1. Reaction forces (LC2)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	-0.476	0.000	0.000
5	-0.476	0.000	0.000
7	-0.476	0.000	0.000
9	-0.476	0.000	0.000
11	-0.476	0.000	0.000
44	-0.748	0.000	0.000
45	-0.748	0.000	0.000
46	-0.748	0.000	0.000
47	-0.748	0.000	0.000
48	-0.748	0.000	0.000
$\Sigma$ Forces	-6.120	0.000	0.000
$\Sigma$ Loads	-6.120	0.000	0.000

Preliminary Report

6.3.4. Wind Upward (LC3)

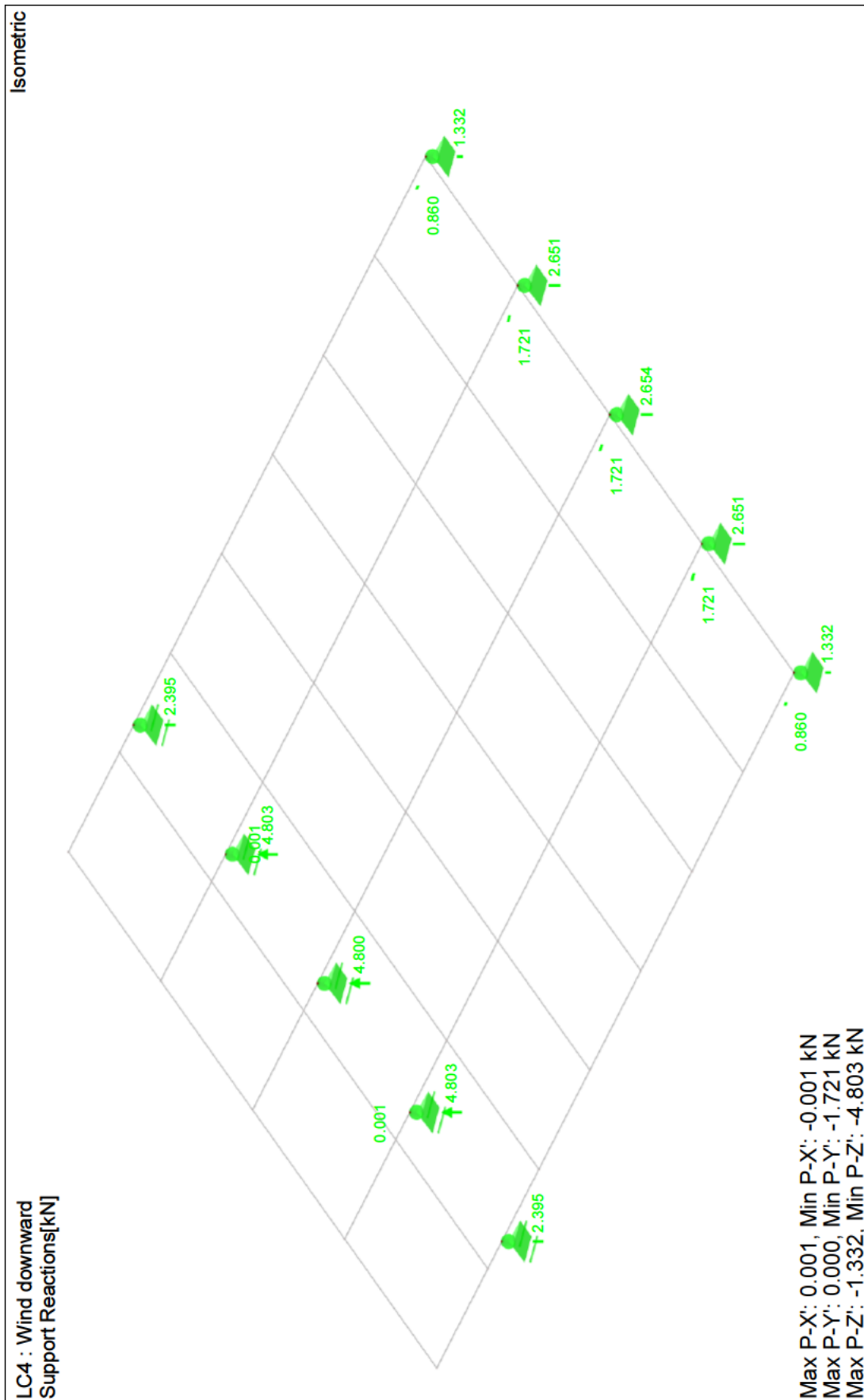


### 6.3.4.1. Reaction forces (LC3)

Node No.	Support Forces [kN]		
	$P_{X'}$	$P_{Y'}$	$P_{Z'}$
3	0.897	3.698	5.713
5	0.018	7.487	11.541
7	0.000	7.458	11.504
9	-0.018	7.487	11.541
11	-0.897	3.698	5.713
44	-1.190	0.000	10.333
45	-0.475	0.000	20.861
46	0.000	0.000	20.801
47	0.475	0.000	20.861
48	1.190	0.000	10.333
$\Sigma$ Forces	0.000	29.828	129.200
$\Sigma$ Loads	0.000	29.828	129.200

Preliminary Report

6.3.5. Wind downward (LC4)

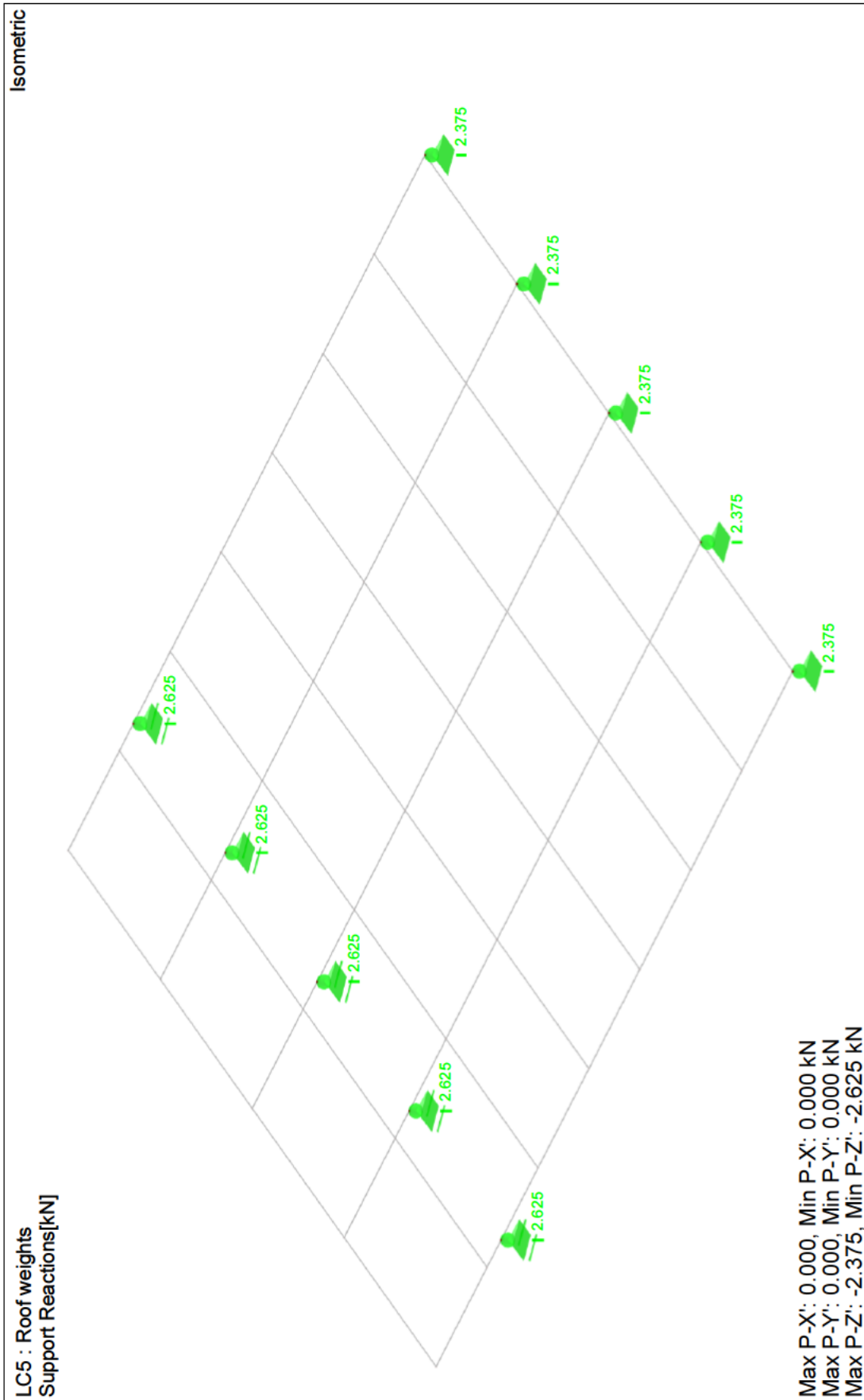


### 6.3.5.1. Reaction forces (LC4)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.000	-0.860	-1.332
5	0.000	-1.721	-2.651
7	0.000	-1.721	-2.654
9	0.000	-1.721	-2.651
11	0.000	-0.860	-1.332
44	0.000	0.000	-2.395
45	-0.001	0.000	-4.803
46	0.000	0.000	-4.800
47	0.001	0.000	-4.803
48	0.000	0.000	-2.395
$\Sigma$ Forces	0.000	-6.884	-29.816
$\Sigma$ Loads	0.000	-6.884	-29.816

Preliminary Report

6.3.6. Roof weight (LC5)

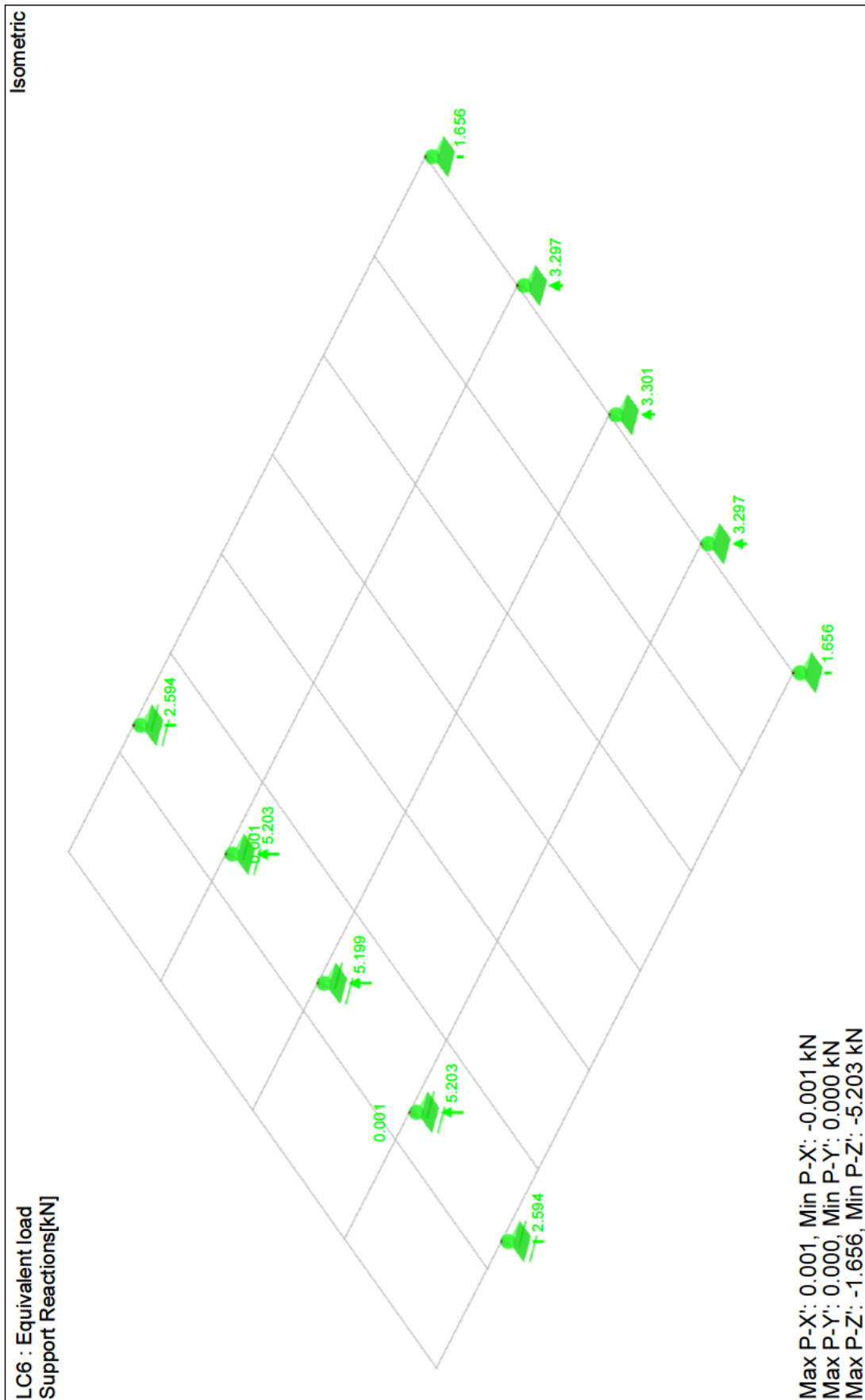


### 6.3.6.1. Reaction forces (LC5)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.000	0.000	-2.375
5	0.000	0.000	-2.375
7	0.000	0.000	-2.375
9	0.000	0.000	-2.375
11	0.000	0.000	-2.375
44	0.000	0.000	-2.625
45	0.000	0.000	-2.625
46	0.000	0.000	-2.625
47	0.000	0.000	-2.625
48	0.000	0.000	-2.625
$\Sigma$ Forces	0.000	0.000	-25.000
$\Sigma$ Loads	0.000	0.000	-25.000

Preliminary Report

6.3.7. Equivalent load (LC6)



### 6.3.7.1. Reaction forces (LC6)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.000	0.000	-1.656
5	0.000	0.000	-3.297
7	0.000	0.000	-3.301
9	0.000	0.000	-3.297
11	0.000	0.000	-1.656
44	0.000	0.000	-2.594
45	-0.001	0.000	-5.203
46	0.000	0.000	-5.199
47	0.001	0.000	-5.203
48	0.000	0.000	-2.594
$\Sigma$ Forces	0.000	0.000	-34.000
$\Sigma$ Loads	0.000	0.000	-34.000

Preliminary Report

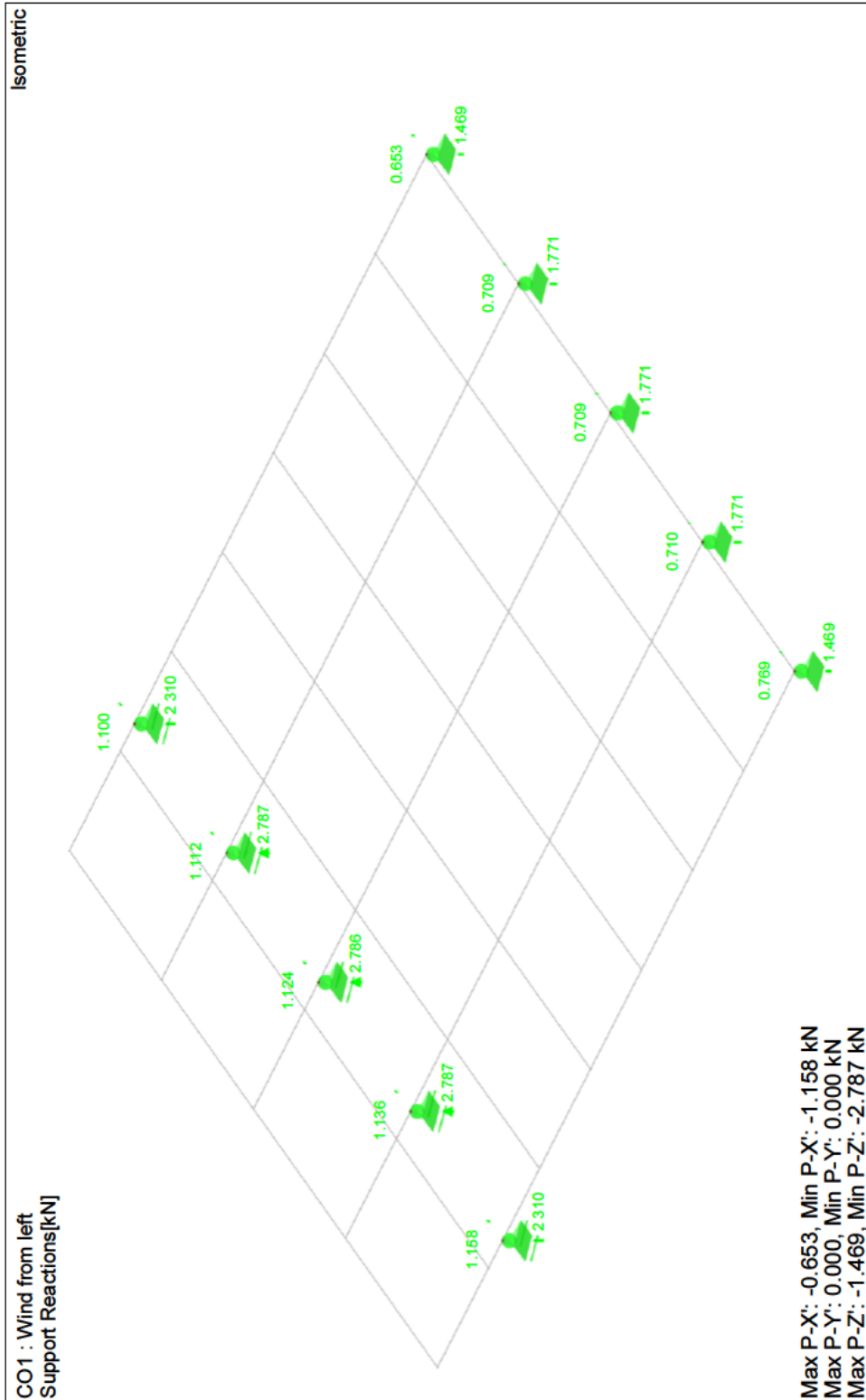
### 6.3.8. Wind from left (CO1)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind from left = 1.5

Imperfection = 1.0



### 6.3.8.1. Reaction forces (CO1)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	-0.653	0.000	-1.469
5	-0.709	0.000	-1.771
7	-0.709	0.000	-1.771
9	-0.710	0.000	-1.771
11	-0.769	0.000	-1.469
44	-1.158	0.000	-2.310
45	-1.136	0.000	-2.787
46	-1.124	0.000	-2.786
47	-1.112	0.000	-2.787
48	-1.100	0.000	-2.310
$\Sigma$ Forces	-9.180	0.000	-21.233
$\Sigma$ Loads	-9.180	0.000	-21.233

Preliminary Report

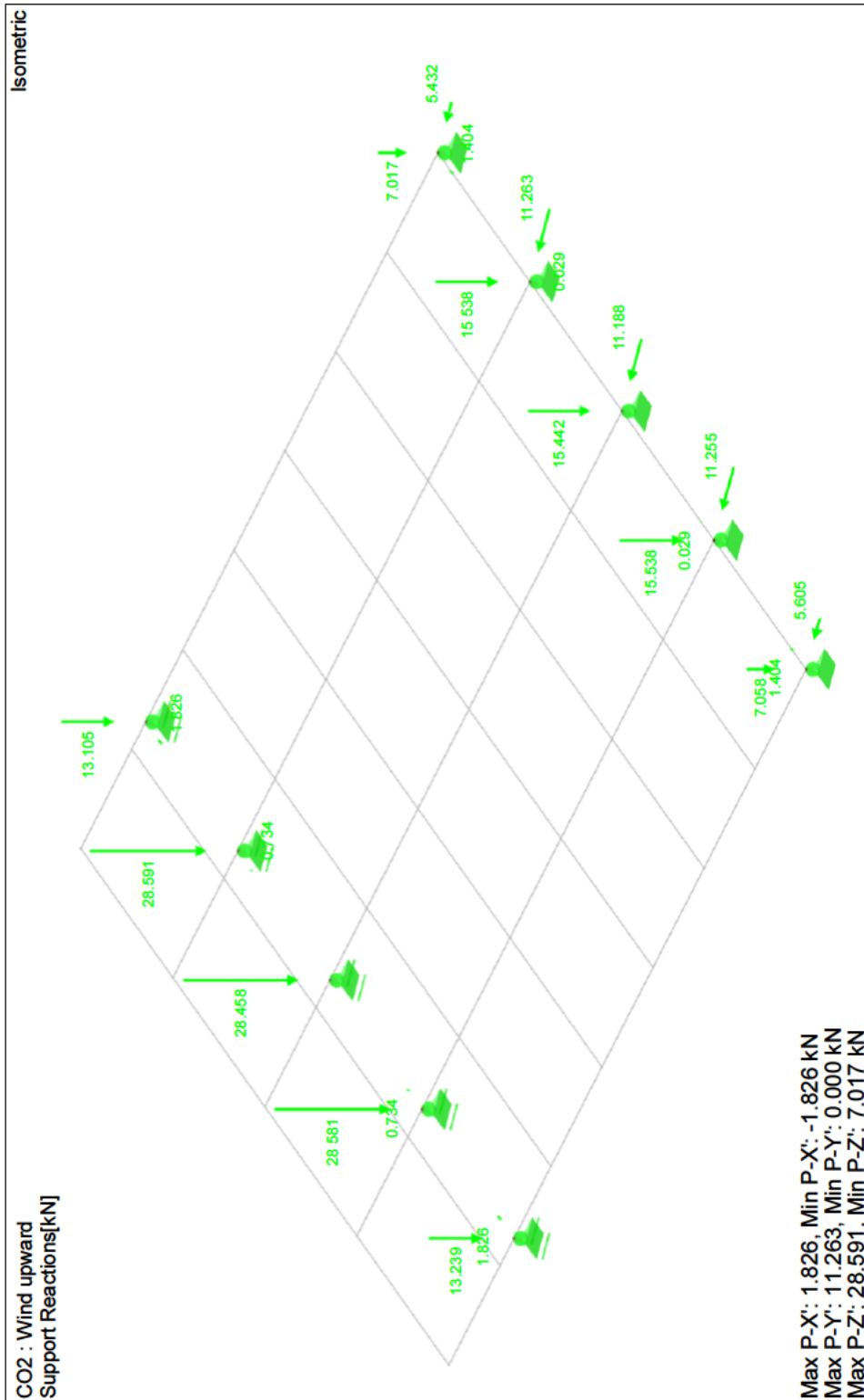
### 6.3.9. Wind upwards (CO2)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind upwards = 1.5

Imperfection = 1.0



### 6.3.9.1. Reaction forces (CO2)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	1.404	5.432	7.017
5	0.029	11.263	15.538
7	0.000	11.188	15.442
9	-0.029	11.255	15.538
11	-1.404	5.605	7.058
44	-1.826	0.000	13.239
45	-0.734	0.000	28.581
46	0.000	0.000	28.458
47	0.734	0.000	28.591
48	1.826	0.000	13.105
$\Sigma$ Forces	0.000	44.742	172.567
$\Sigma$ Loads	0.000	44.742	172.567

Preliminary Report

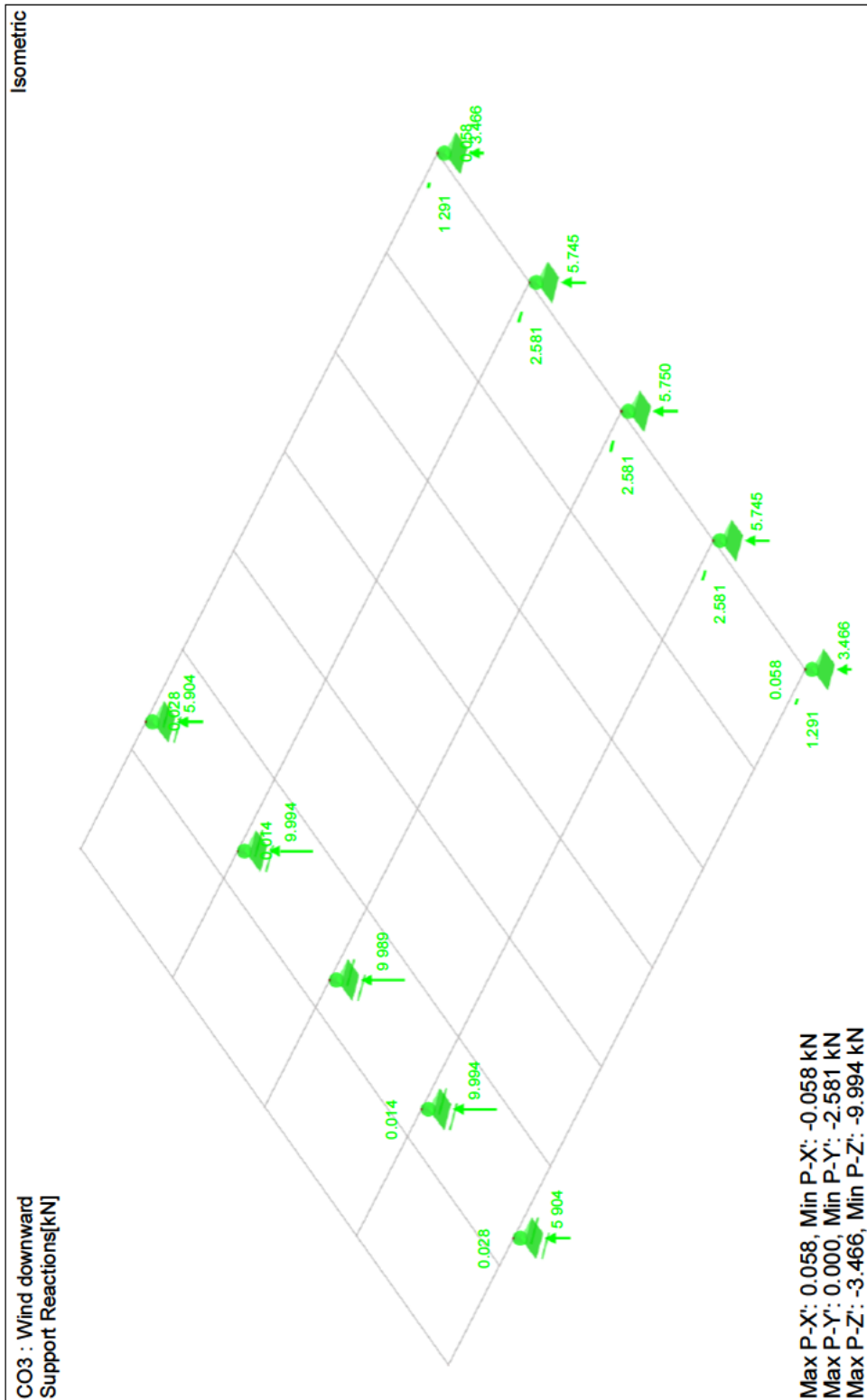
6.3.10. Wind downwards (CO3)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind downwards = 1.5

Imperfection = 1.0



### 6.3.10.1. Reaction forces (CO3)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.058	-1.291	-3.466
5	0.000	-2.581	-5.745
7	0.000	-2.581	-5.750
9	0.000	-2.581	-5.745
11	-0.058	-1.291	-3.466
44	-0.028	0.000	-5.904
45	-0.014	0.000	-9.994
46	0.000	0.000	-9.989
47	0.014	0.000	-9.994
48	0.028	0.000	-5.904
$\Sigma$ Forces	0.000	-10.325	-65.956
$\Sigma$ Loads	0.000	-10.325	-65.956

Preliminary Report

### 6.3.11. Wind downwards and roof weights (CO4)

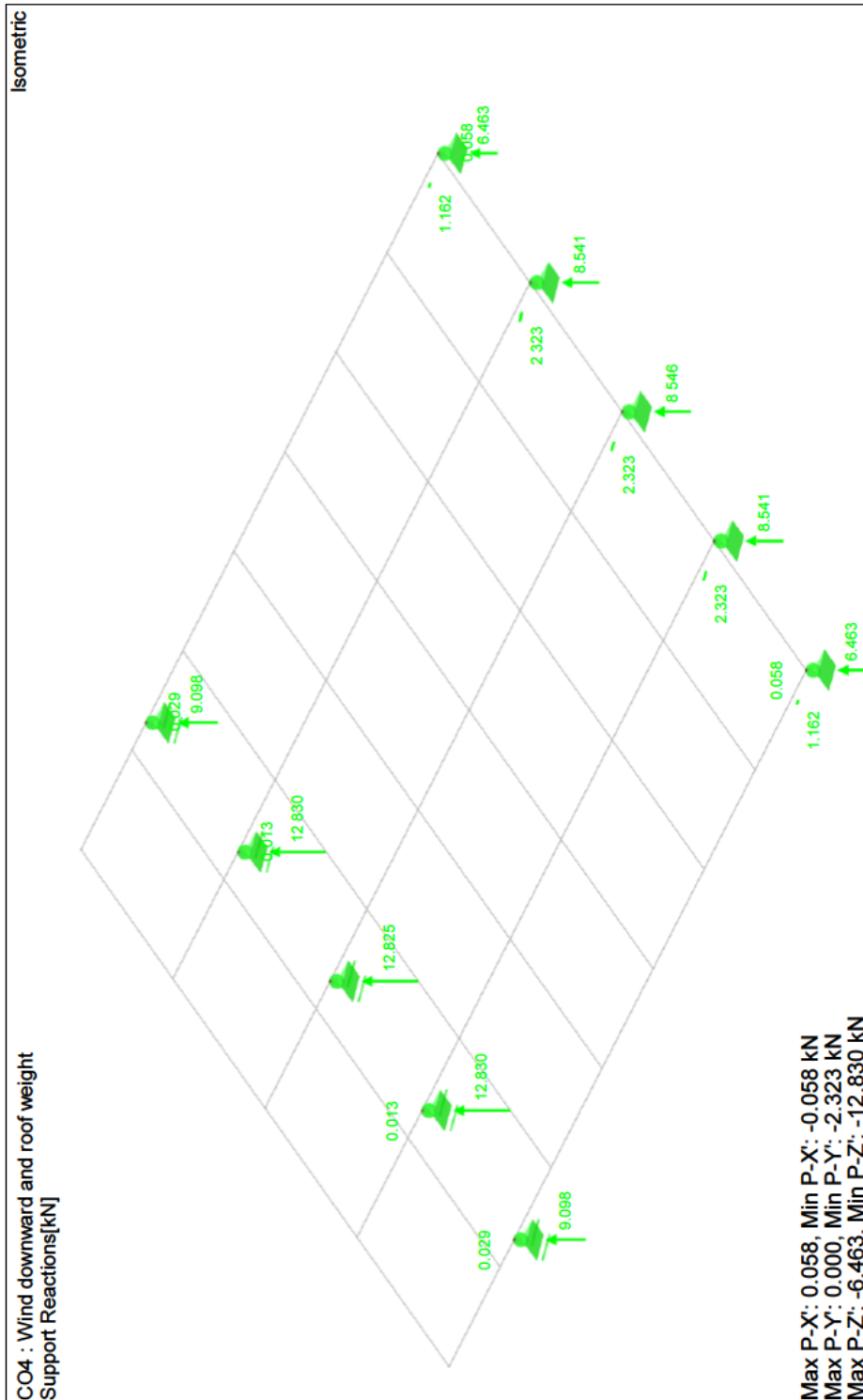
Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Wind downwards = 1.35

Roof weights = 1.35

Imperfection = 1.0



### 6.3.11.1. Reaction forces (CO4)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.058	-1.162	-6.463
5	0.000	-2.323	-8.541
7	0.000	-2.323	-8.546
9	0.000	-2.323	-8.541
11	-0.058	-1.162	-6.463
44	-0.029	0.000	-9.098
45	-0.013	0.000	-12.830
46	0.000	0.000	-12.825
47	0.013	0.000	-12.830
48	0.029	0.000	-9.098
$\Sigma$ Forces	0.000	-9.293	-95.234
$\Sigma$ Loads	0.000	-9.293	-95.234

Preliminary Report

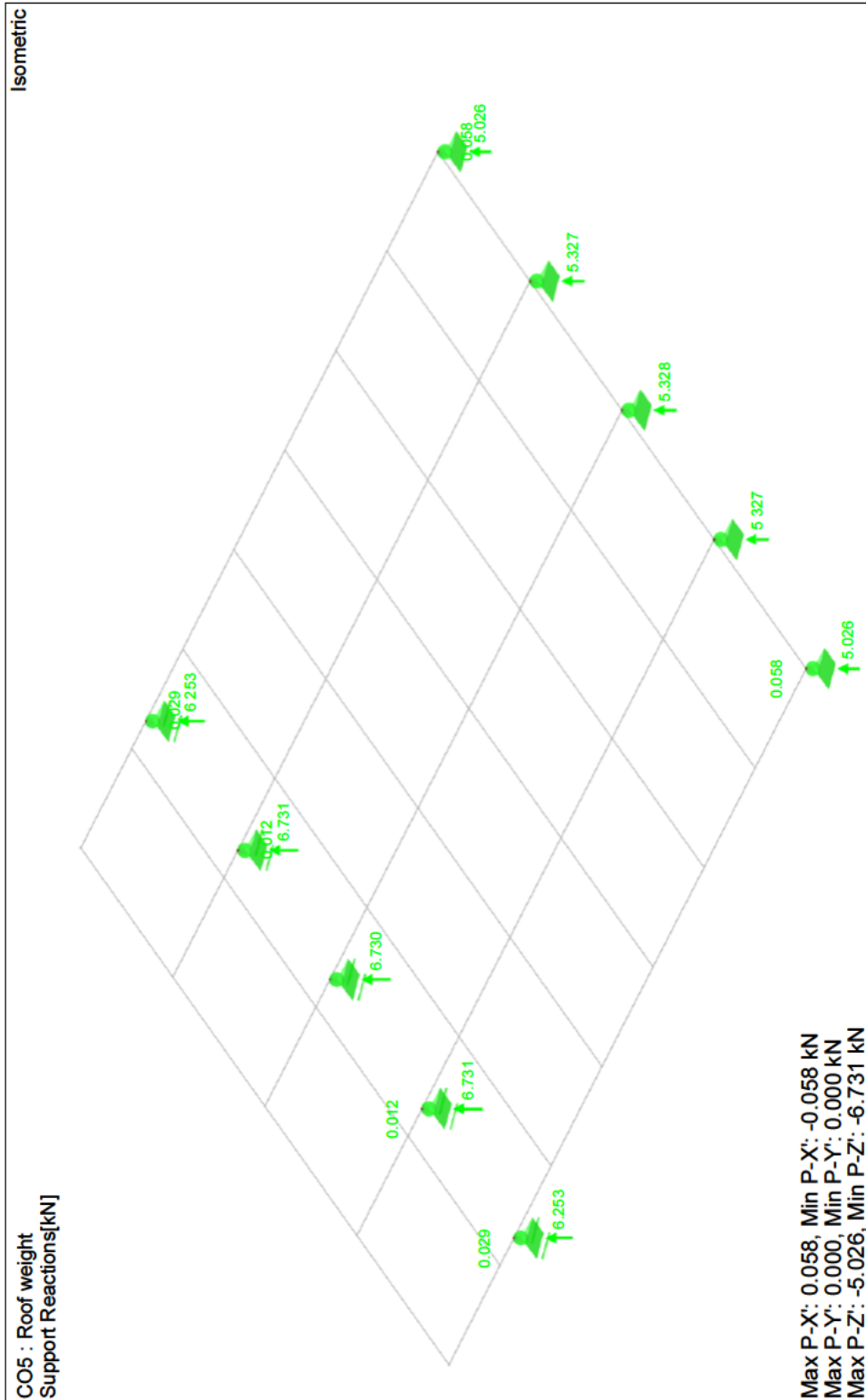
### 6.3.12. Roof weights (CO5)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Roof weights = 1.5

Imperfection = 1.0



### 6.3.12.1. Reaction forces (CO5)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.058	0.000	-5.026
5	0.000	0.000	-5.327
7	0.000	0.000	-5.328
9	0.000	0.000	-5.327
11	-0.058	0.000	-5.026
44	-0.029	0.000	-6.253
45	-0.012	0.000	-6.731
46	0.000	0.000	-6.730
47	0.012	0.000	-6.731
48	0.029	0.000	-6.253
$\Sigma$ Forces	0.000	0.000	-58.733
$\Sigma$ Loads	0.000	0.000	-58.733

Preliminary Report

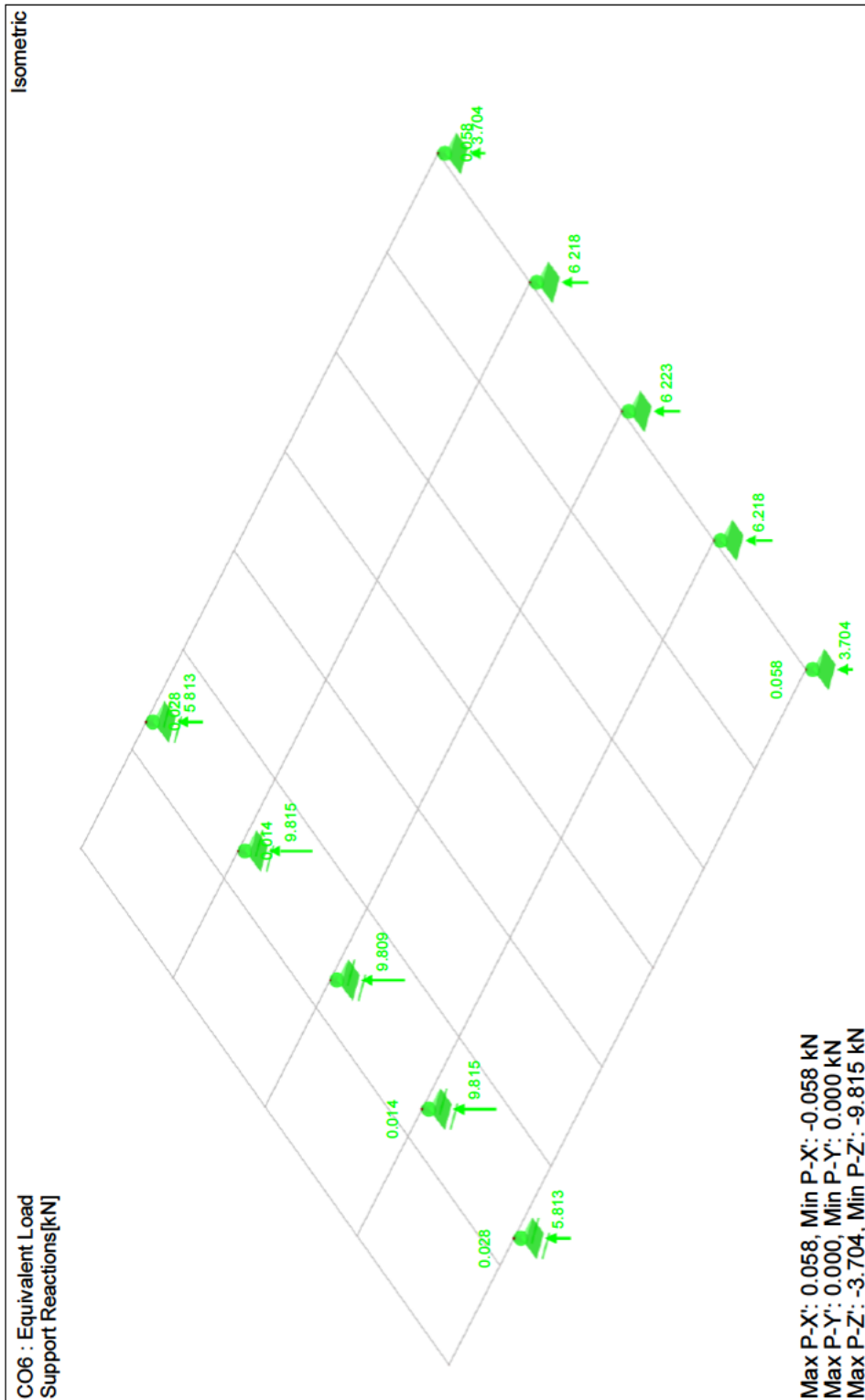
### 6.3.13. Equivalent load (CO6)

Factor of safety (FOS) are applied according to the below scheme,

Own weight = 1.35

Equivalent load = 1.35

Imperfection = 1.0



### 6.3.13.1. Reaction forces (CO6)

Node No.	Support Forces [kN]		
	$P_x$	$P_y$	$P_z$
3	0.058	0.000	-3.704
5	0.000	0.000	-6.218
7	0.000	0.000	-6.223
9	0.000	0.000	-6.218
11	-0.058	0.000	-3.704
44	-0.028	0.000	-5.813
45	-0.014	0.000	-9.815
46	0.000	0.000	-9.809
47	0.014	0.000	-9.815
48	0.028	0.000	-5.813
$\Sigma$ Forces	0.000	0.000	-67.133
$\Sigma$ Loads	0.000	0.000	-67.133

Preliminary Report