



Go2Madeira

STAY. BUILD. LIVE.



# Go2Madeira

STAY. BUILD. LIVE.

## Project Brief

The client requested the optimal position and orientation for their planned building, with two priorities: an unobstructed view across the wide ocean horizon, and the best possible view of the sunset for the longest part of the year.

The study assesses all potential obstacles to the view — in particular neighbouring buildings — and defines the building height accordingly, accounting for the sightline of a person both standing and seated. It also determines in which periods of the year the sunset and sunrise are visible, and exactly where on the horizon the sun sets throughout the year.

# Solar Study Estimation according to the Curic Sun data

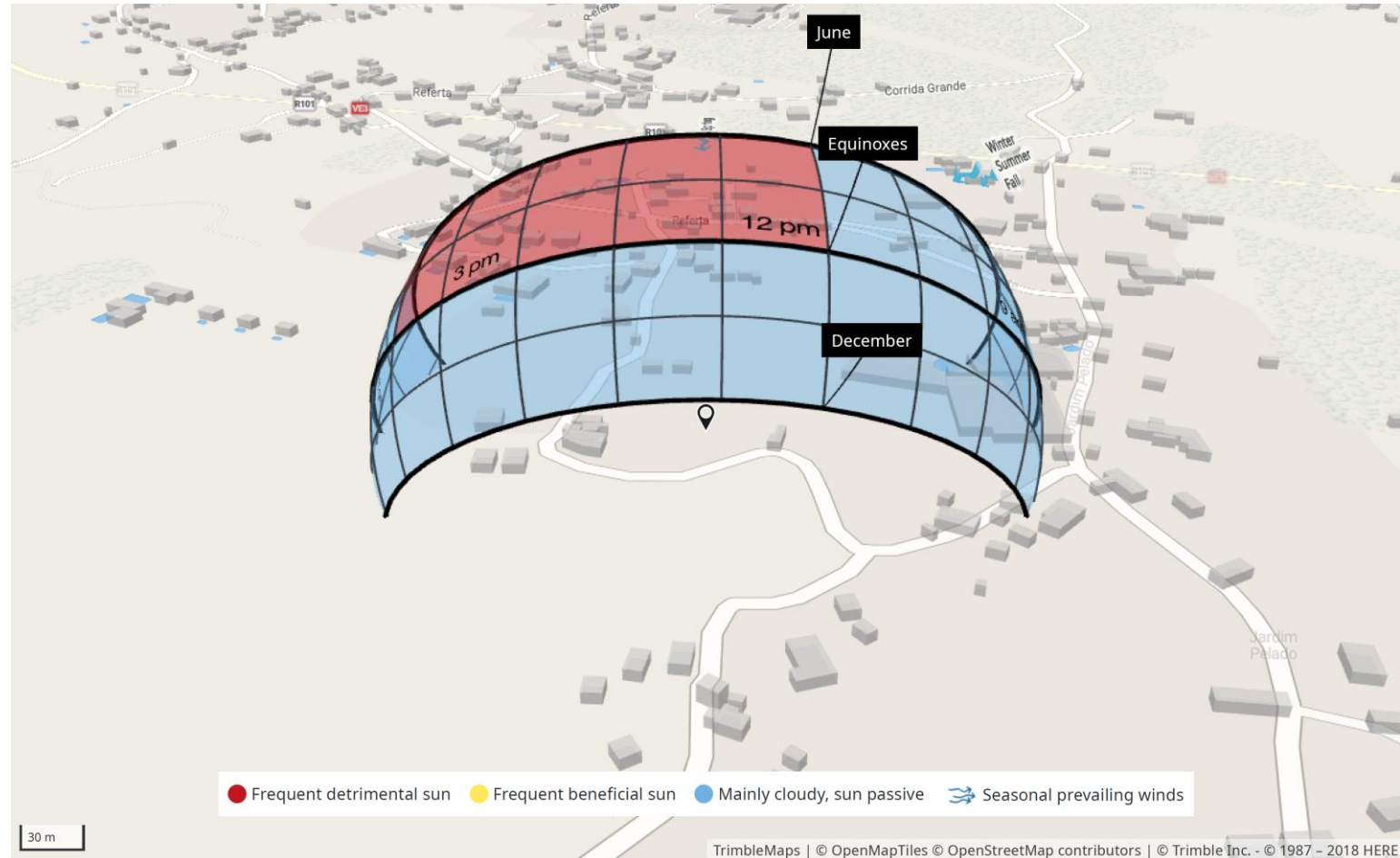


**Building type:**

**Residential**

**Location:**

**Calheta (R.A.M.), Ilha da Madeira, PT**

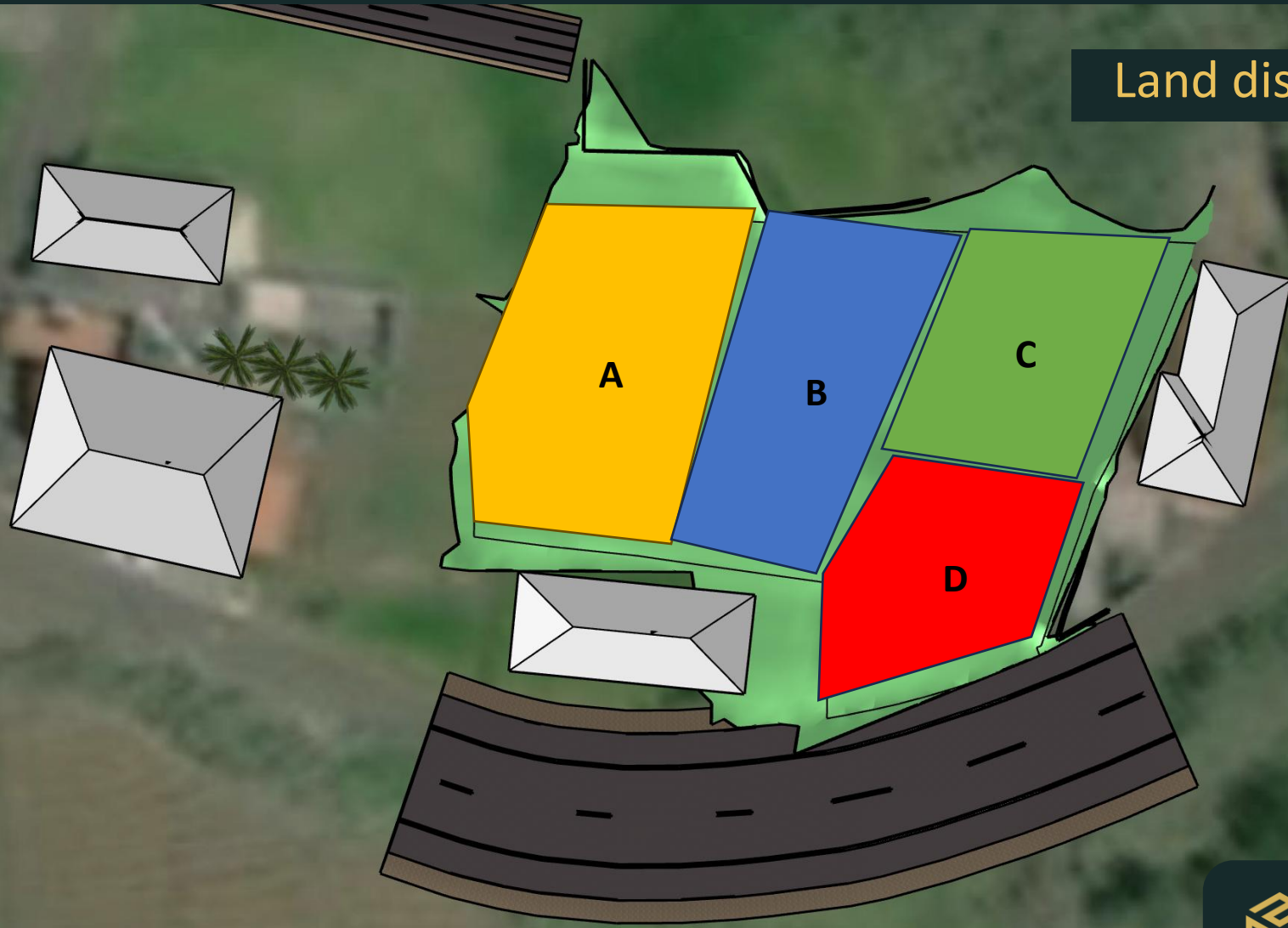


## Site Context

See how the sun and wind affect your site at different times of the year

# Solar Study Estimation according to the Curic Sun data

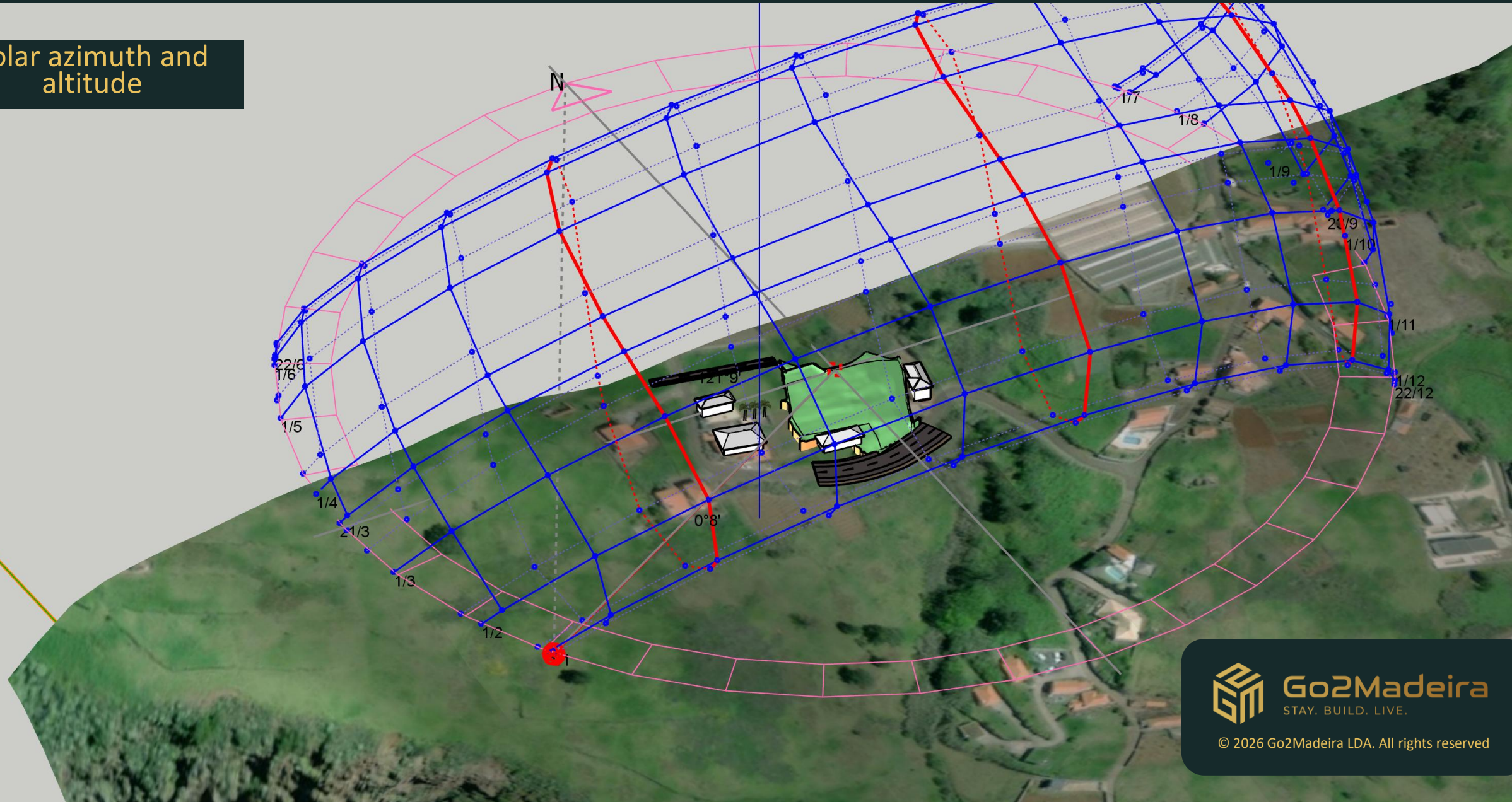
Land disposition



**Go2Madeira**  
STAY. BUILD. LIVE.

© 2026 Go2Madeira LDA. All rights reserved

## Solar azimuth and altitude

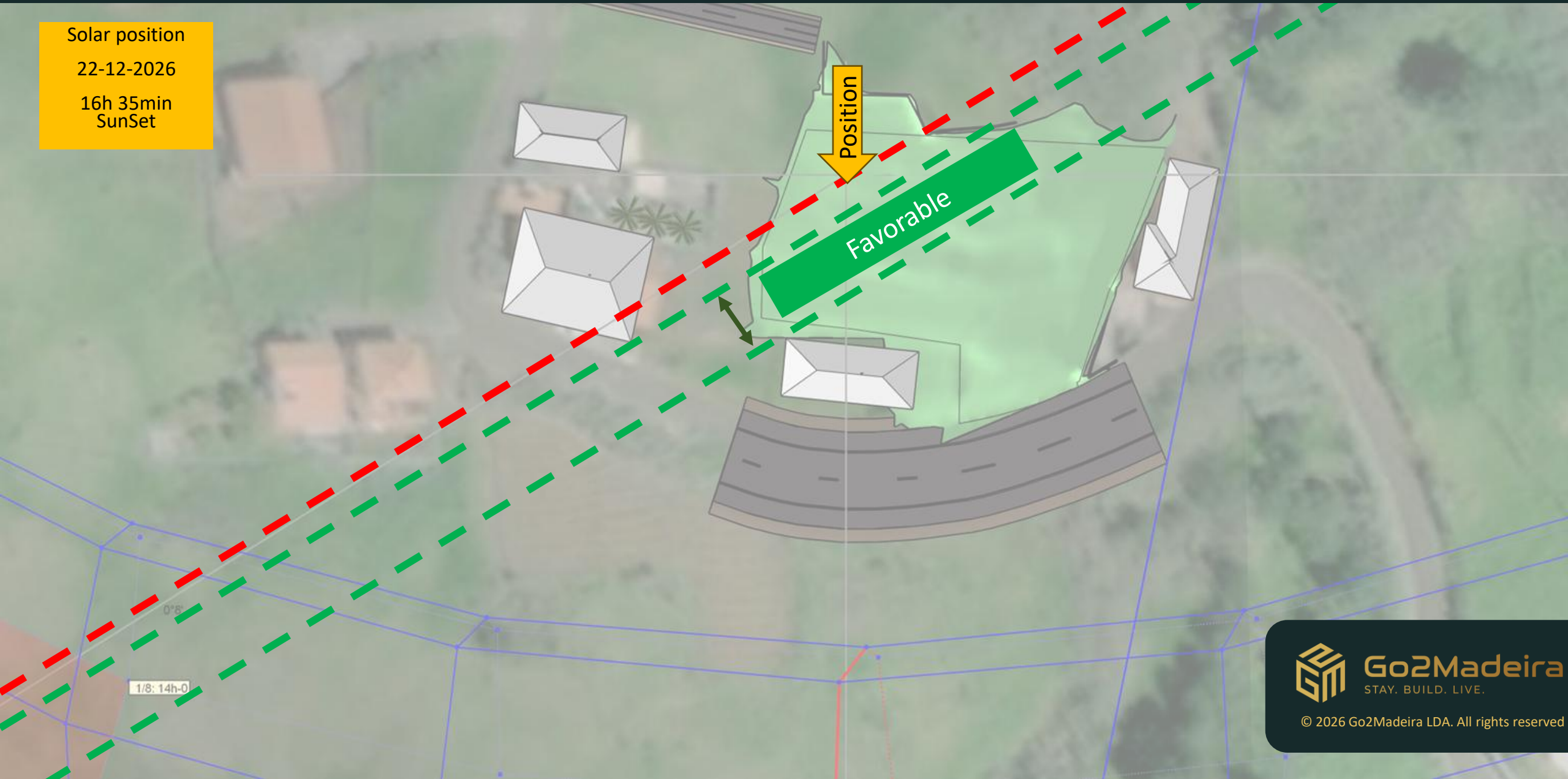


# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

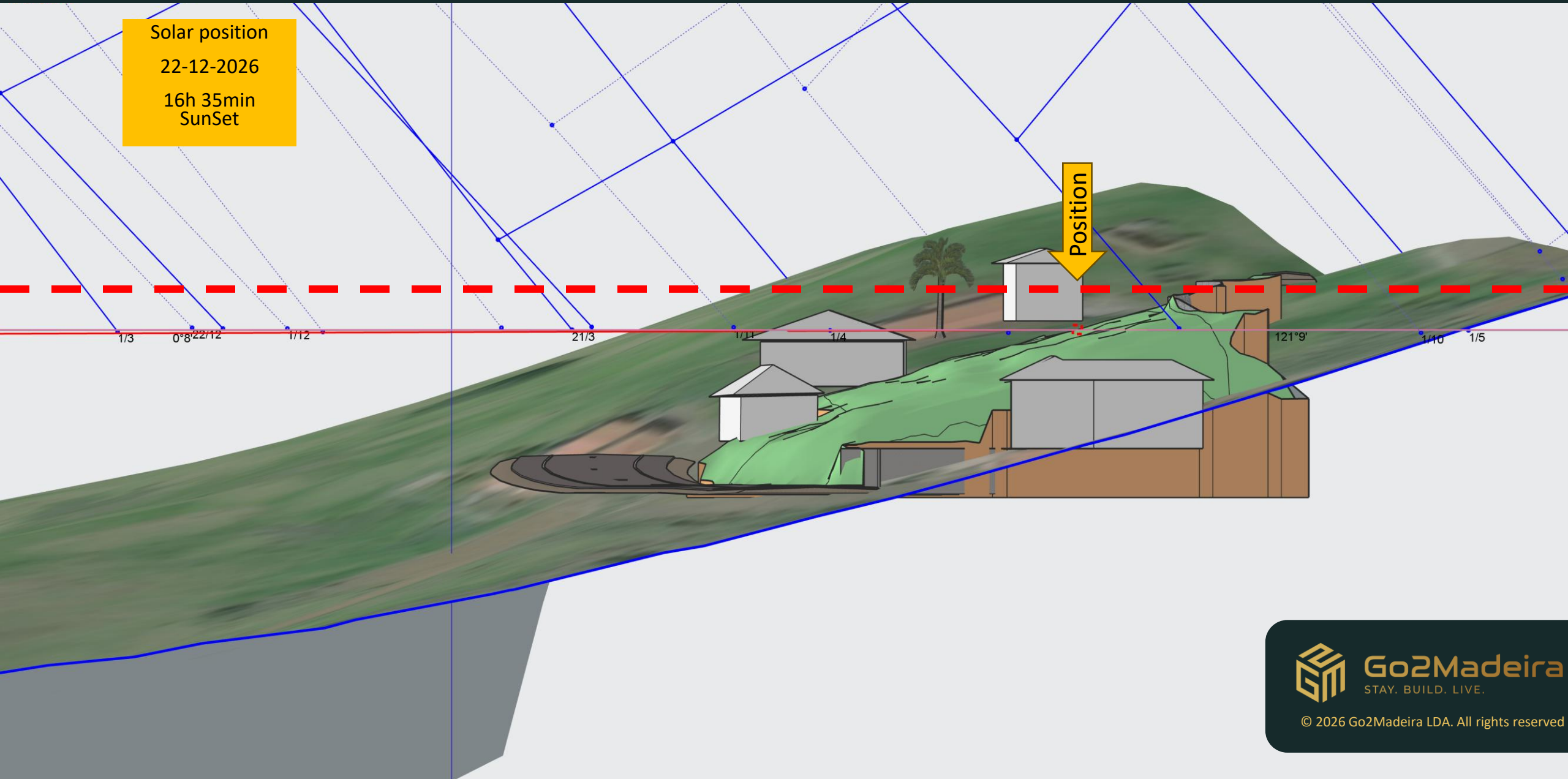
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

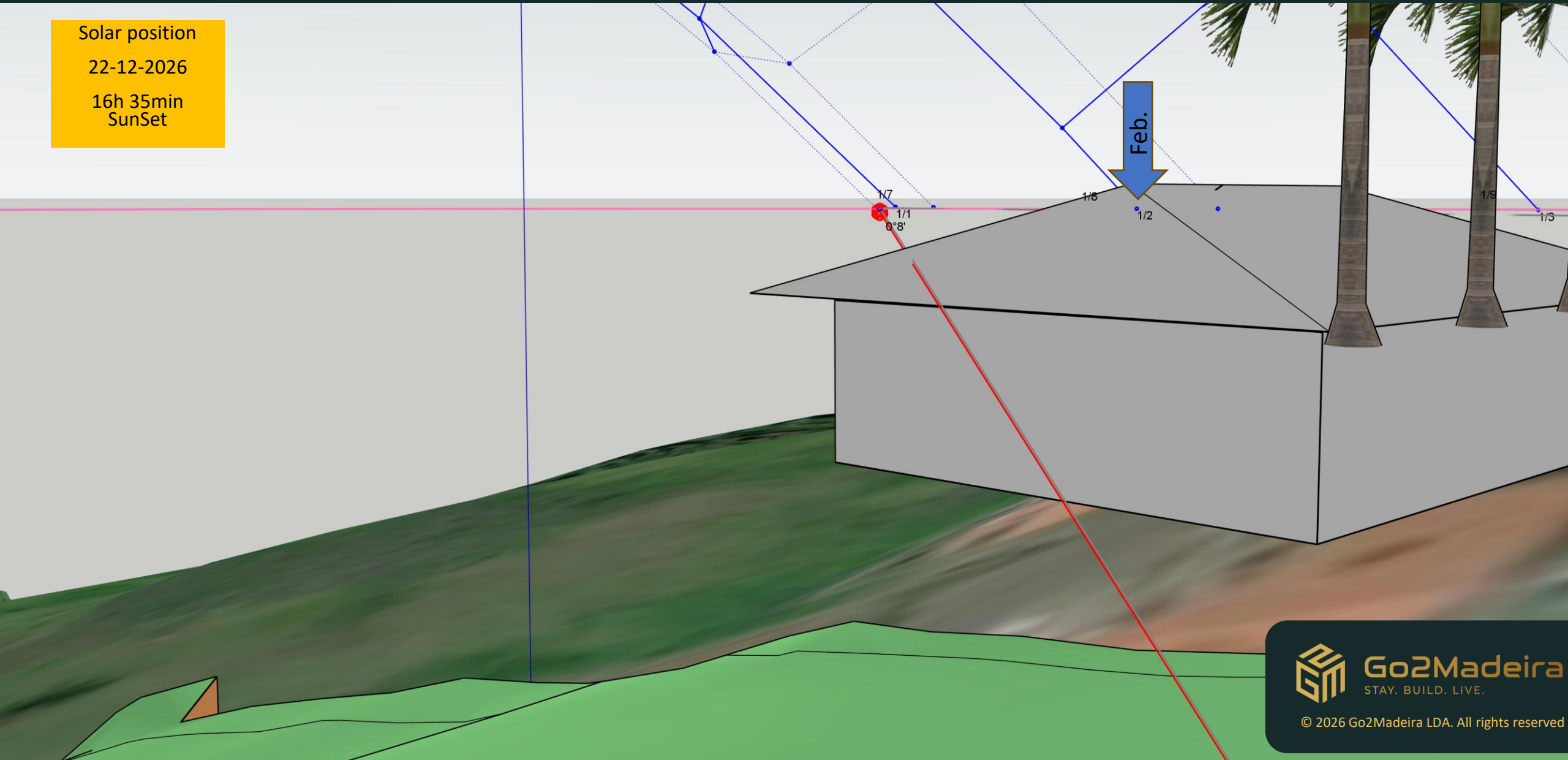
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

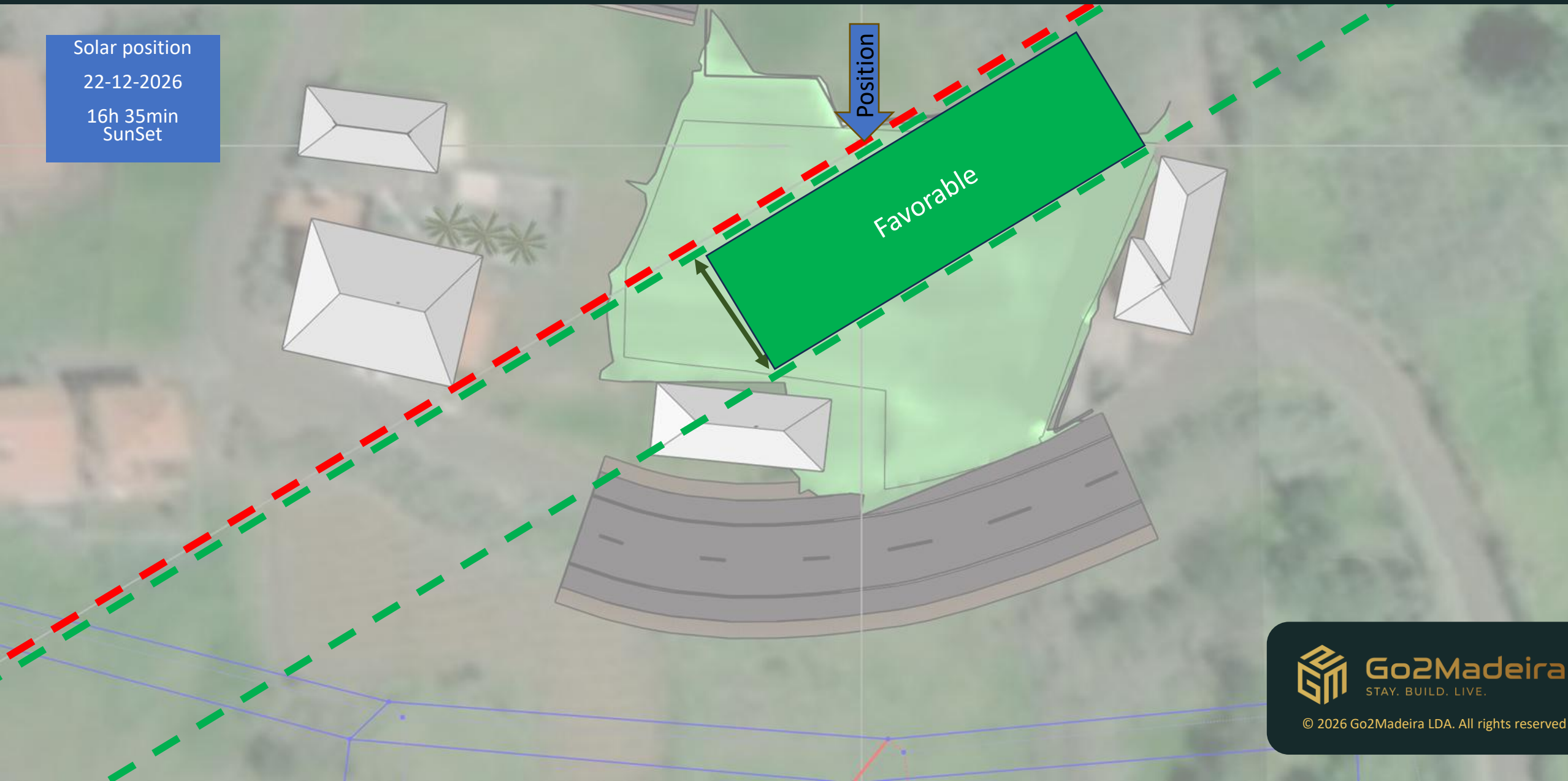
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet

Position



**Go2Madeira**  
STAY. BUILD. LIVE.

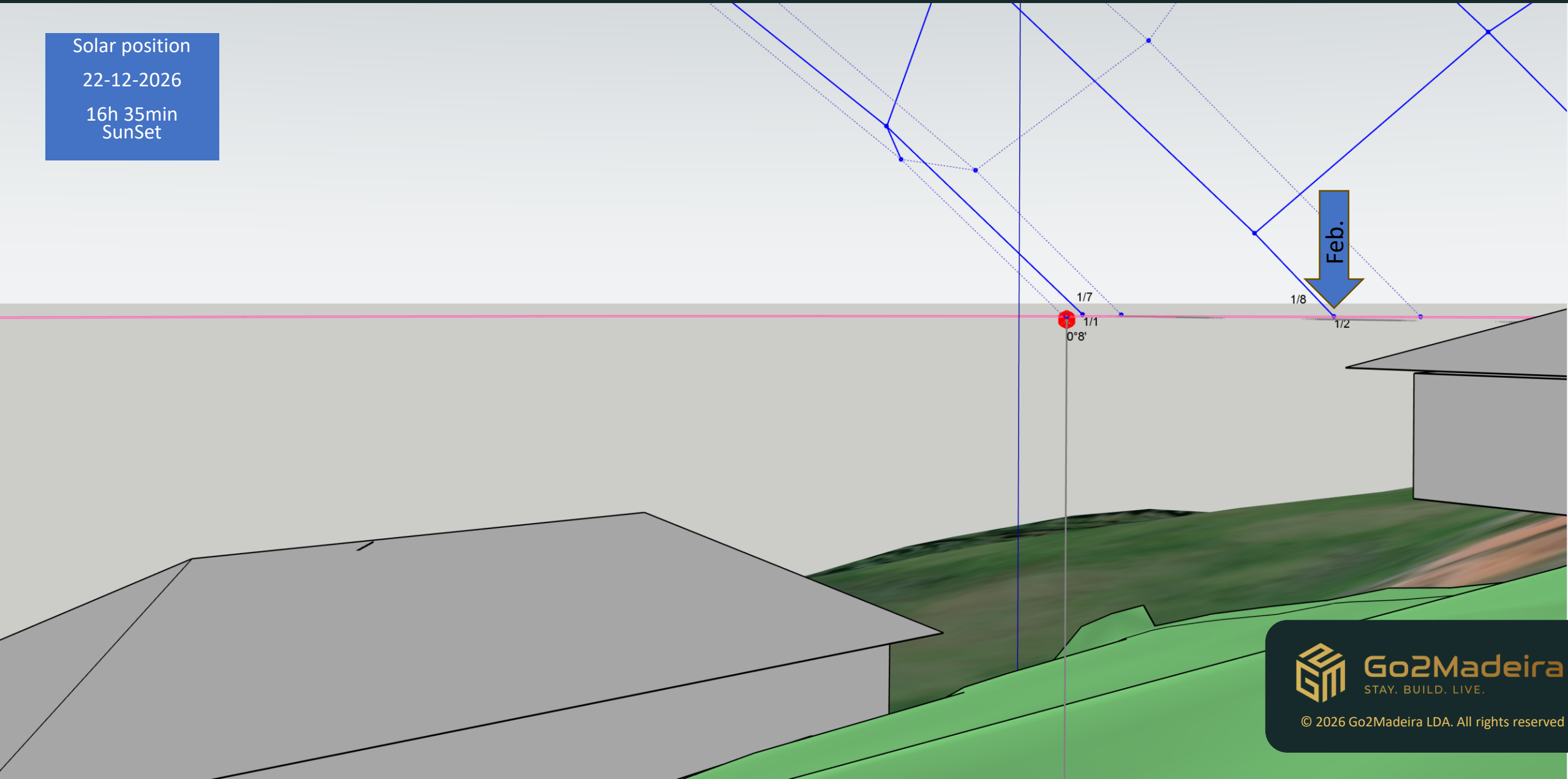
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

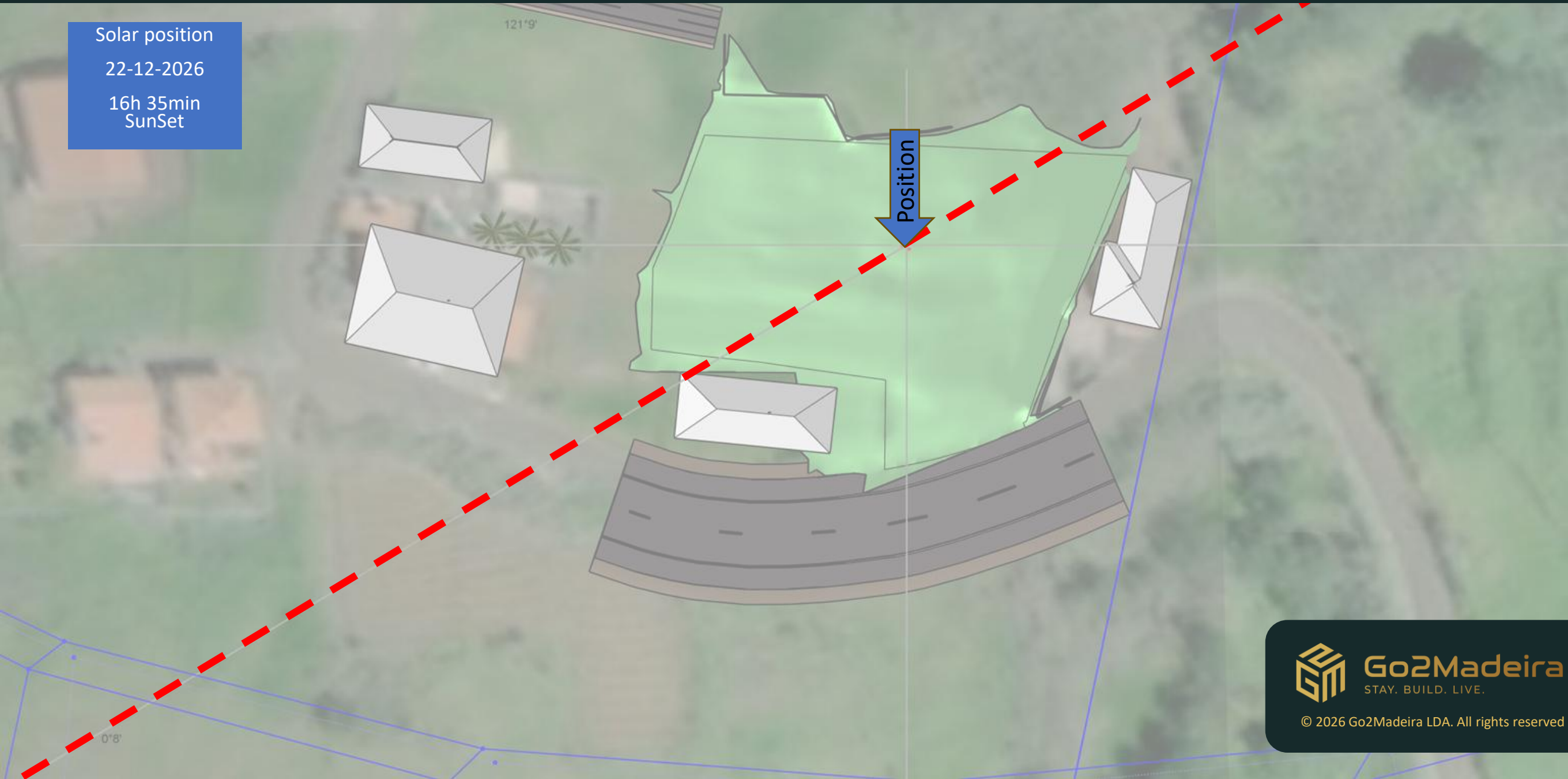
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

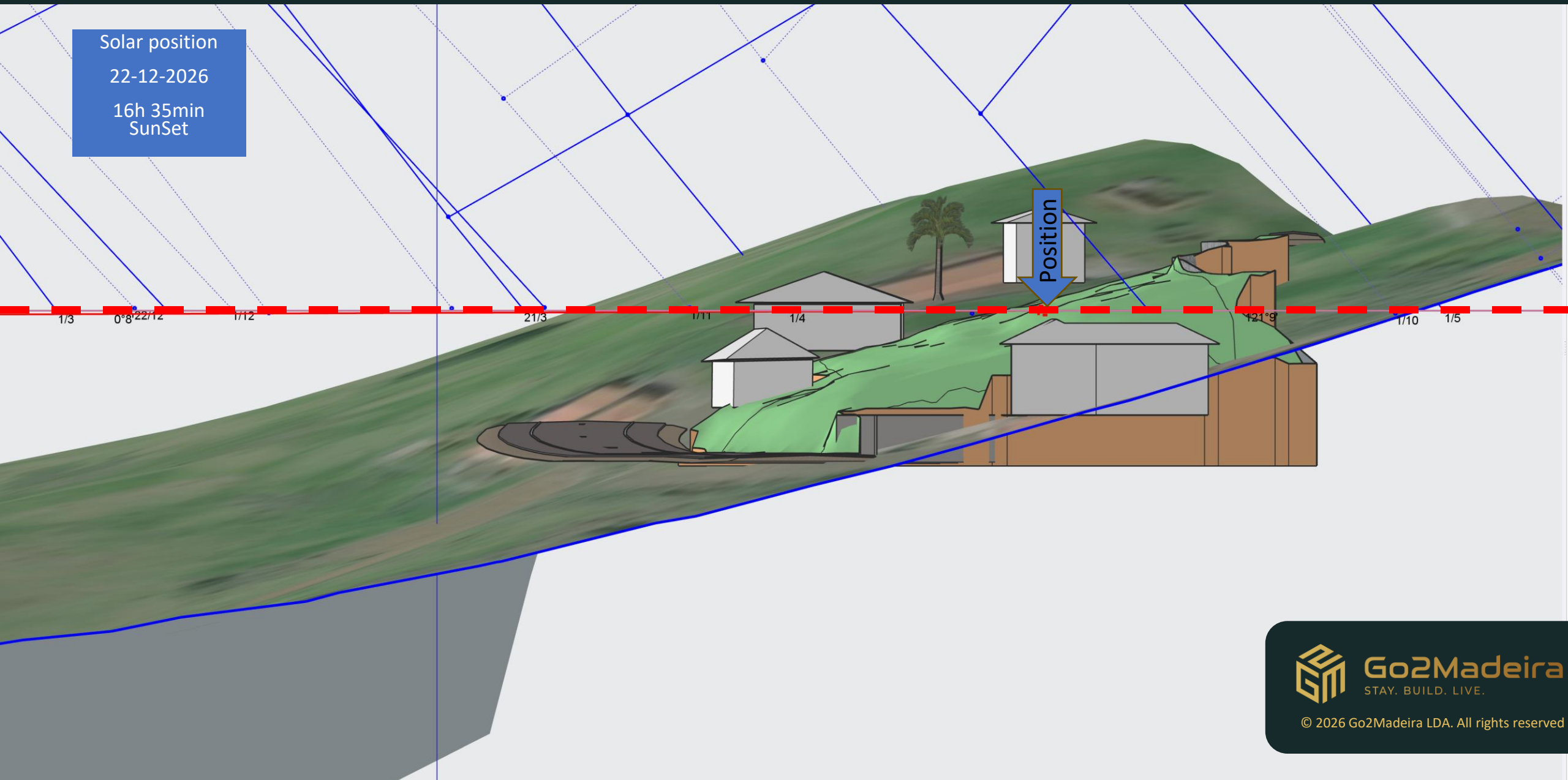
16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data



**Go2Madeira**  
STAY. BUILD. LIVE.

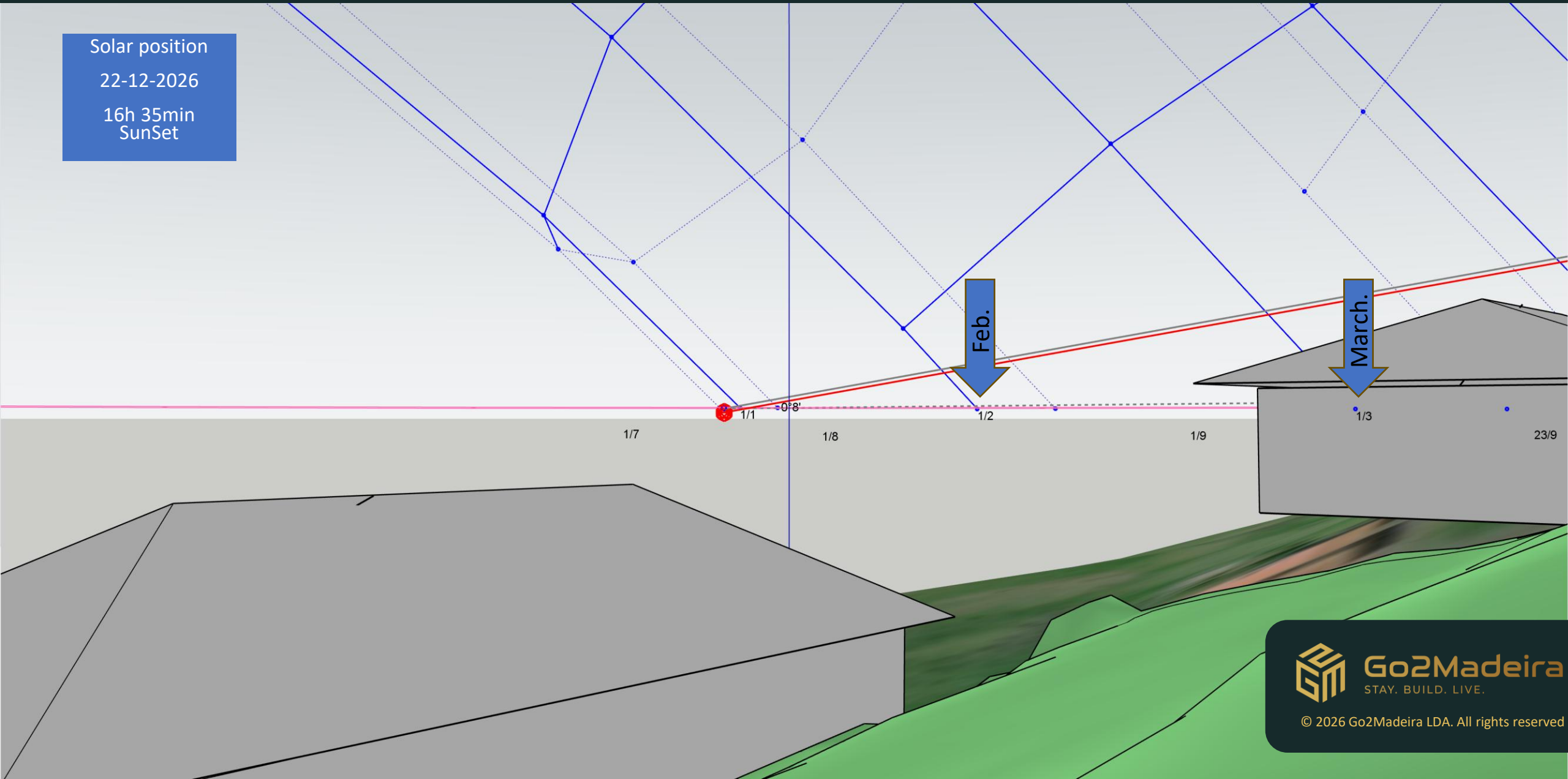
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

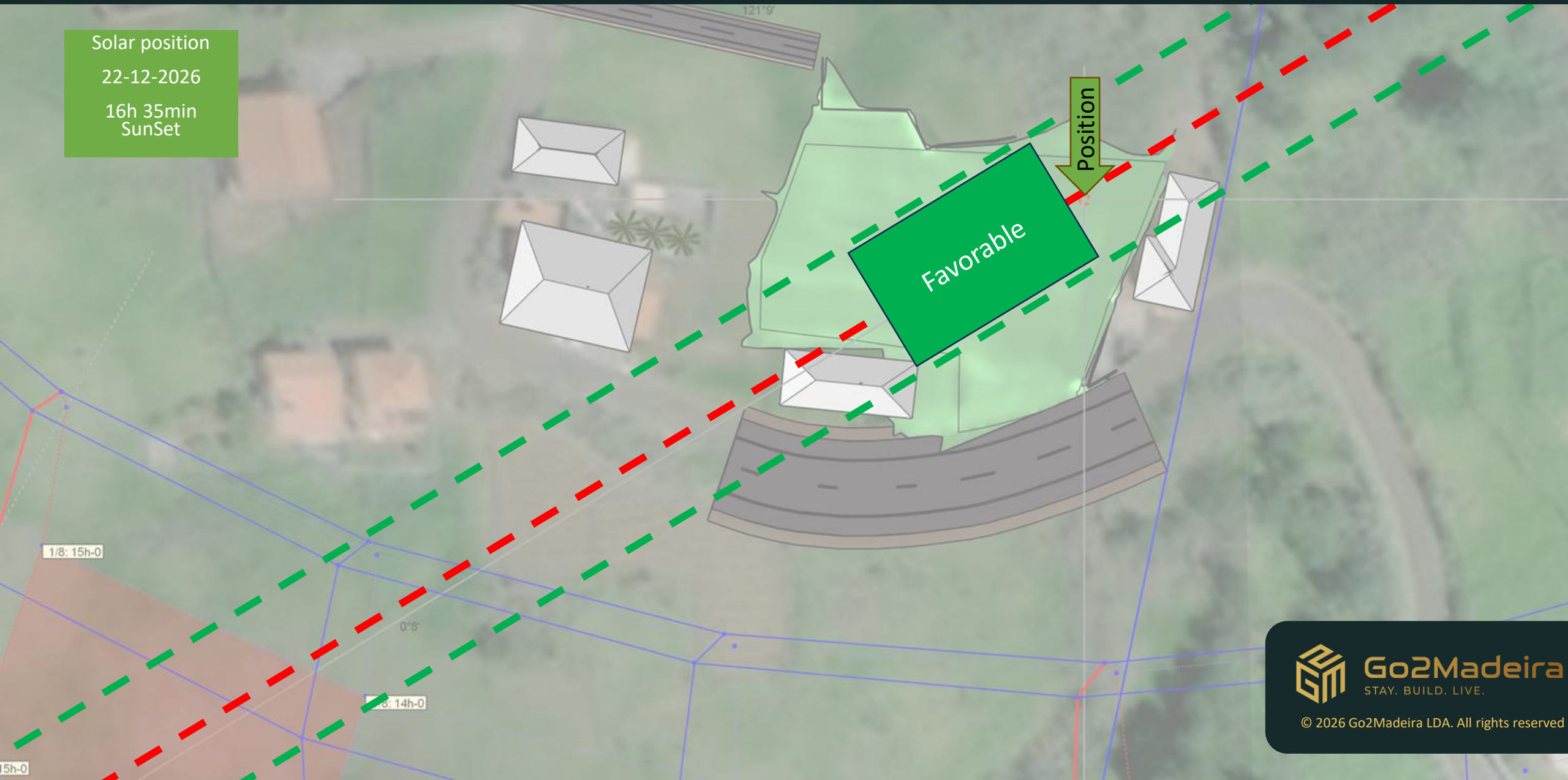
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

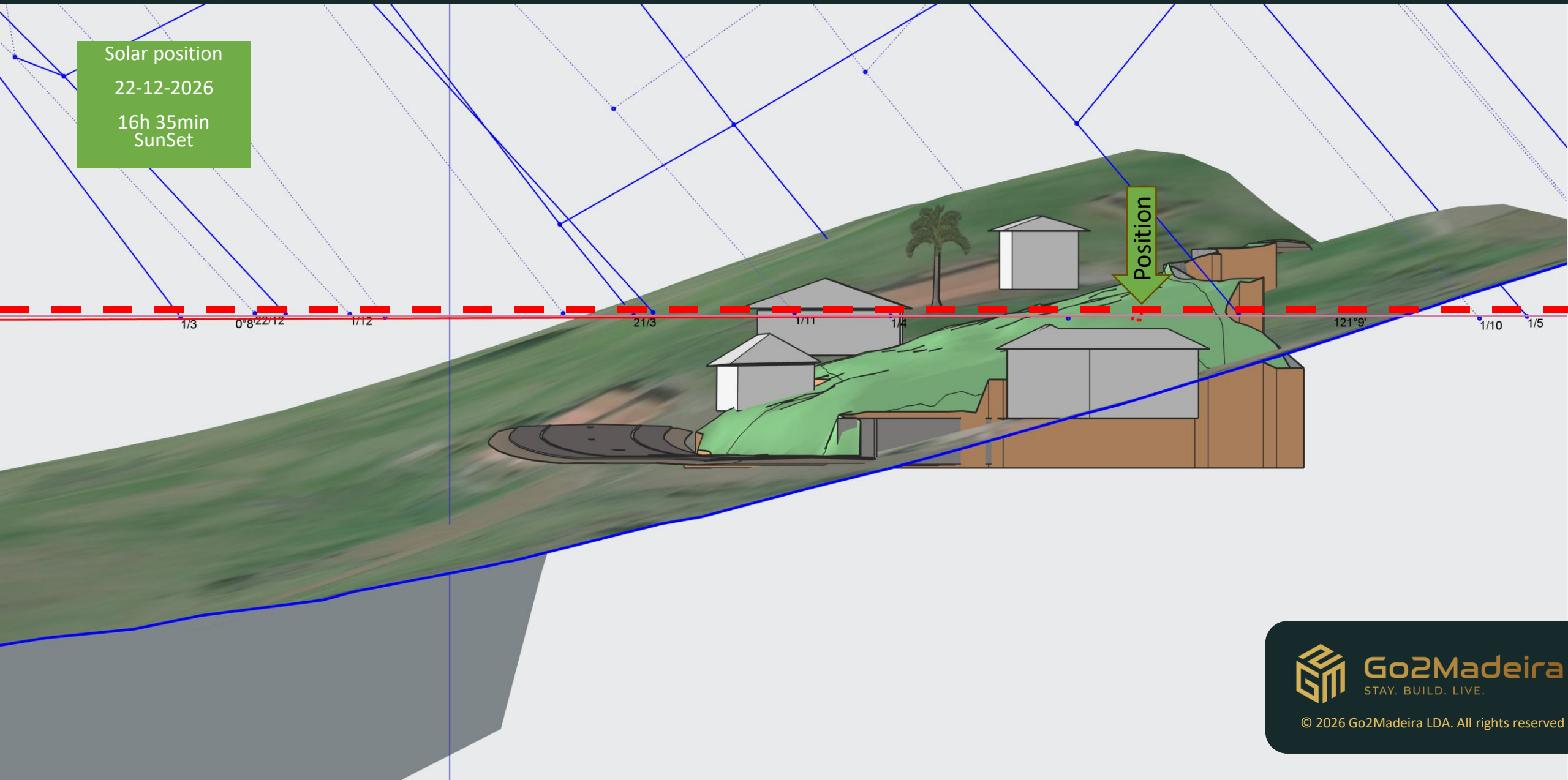
16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data



**Go2Madeira**  
STAY. BUILD. LIVE.

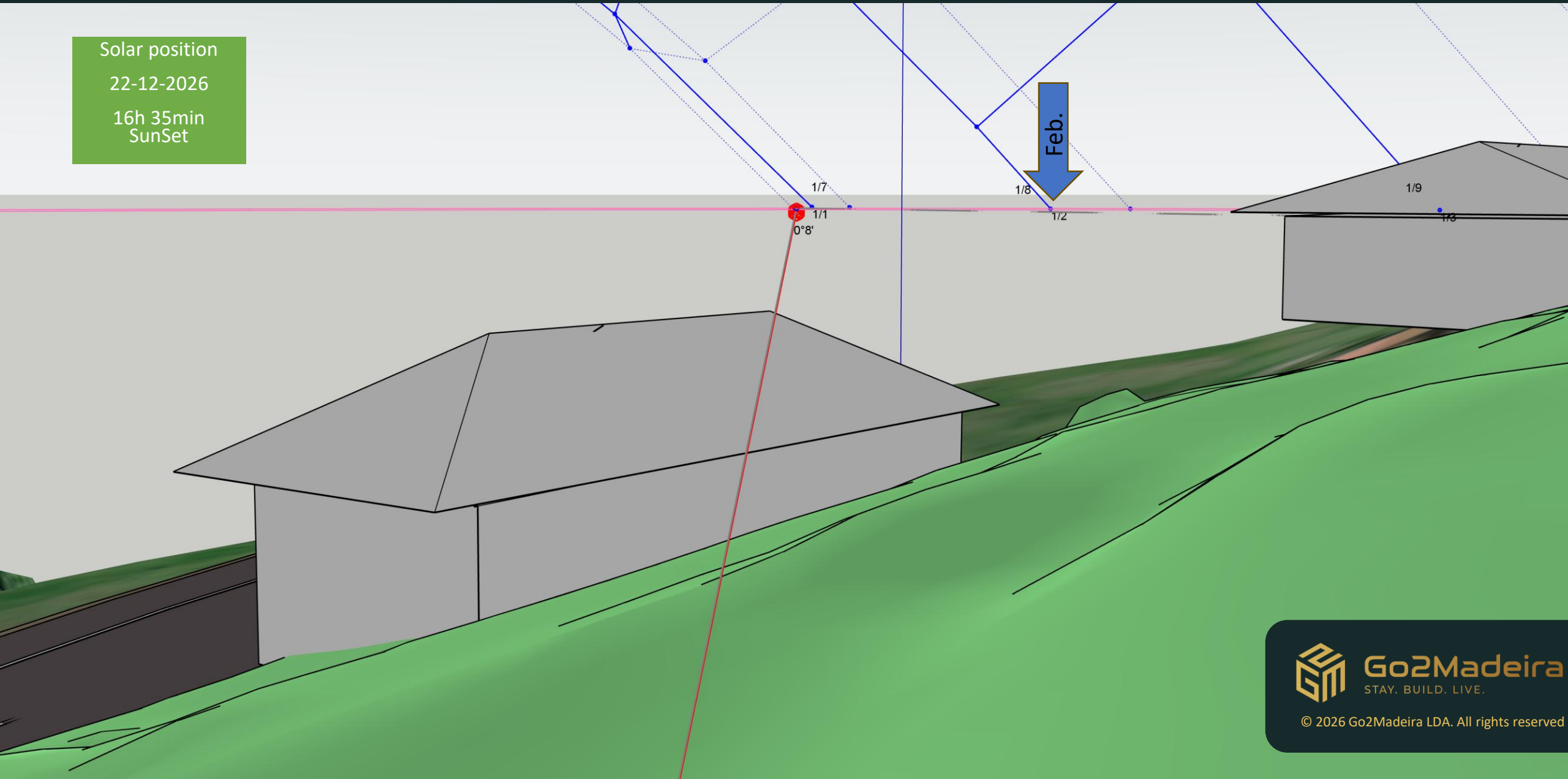
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

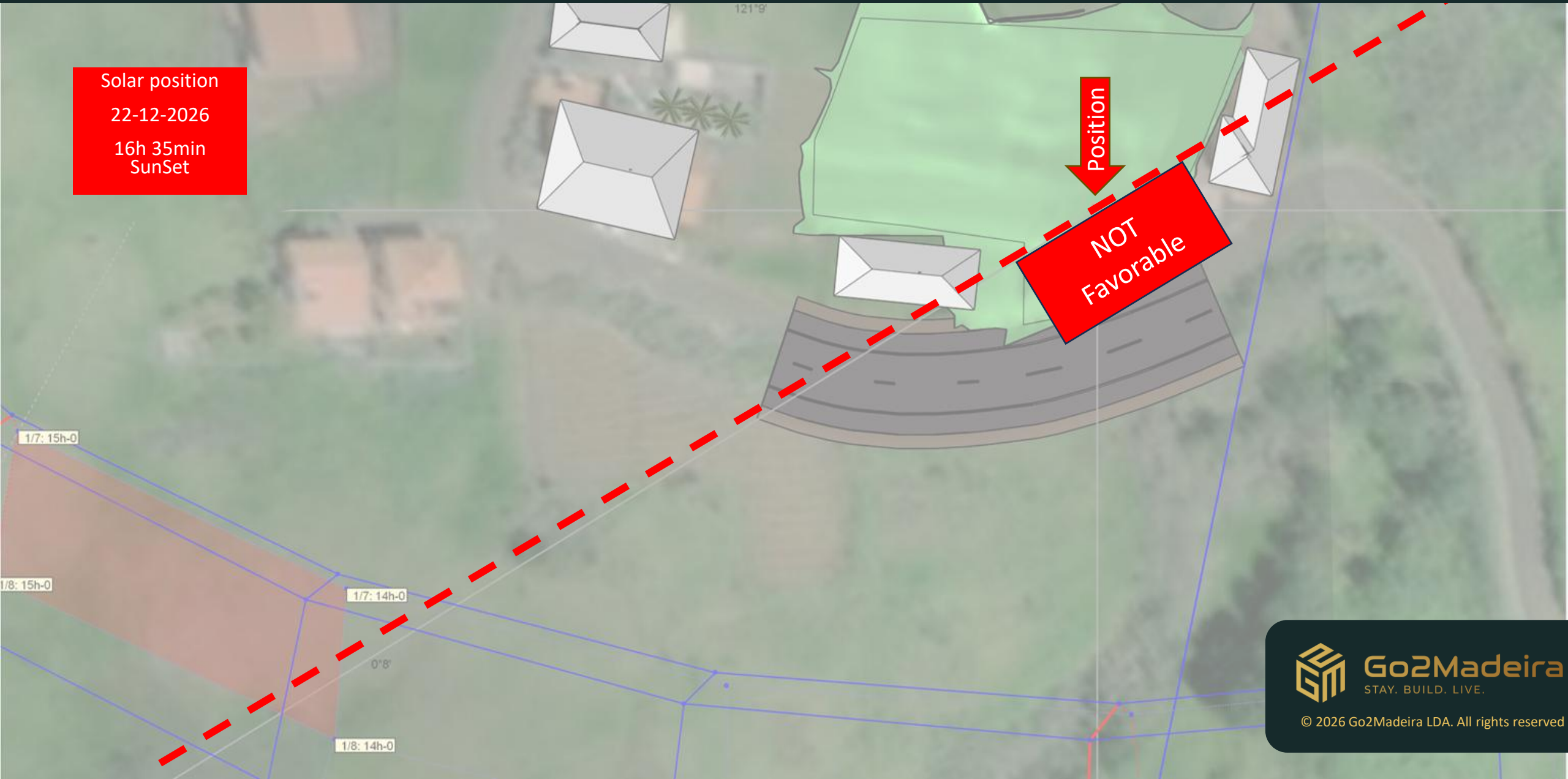
16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data



Solar position

22-12-2026

16h 35min  
SunSet

Position

NOT  
Favorable



**Go2Madeira**  
STAY. BUILD. LIVE.

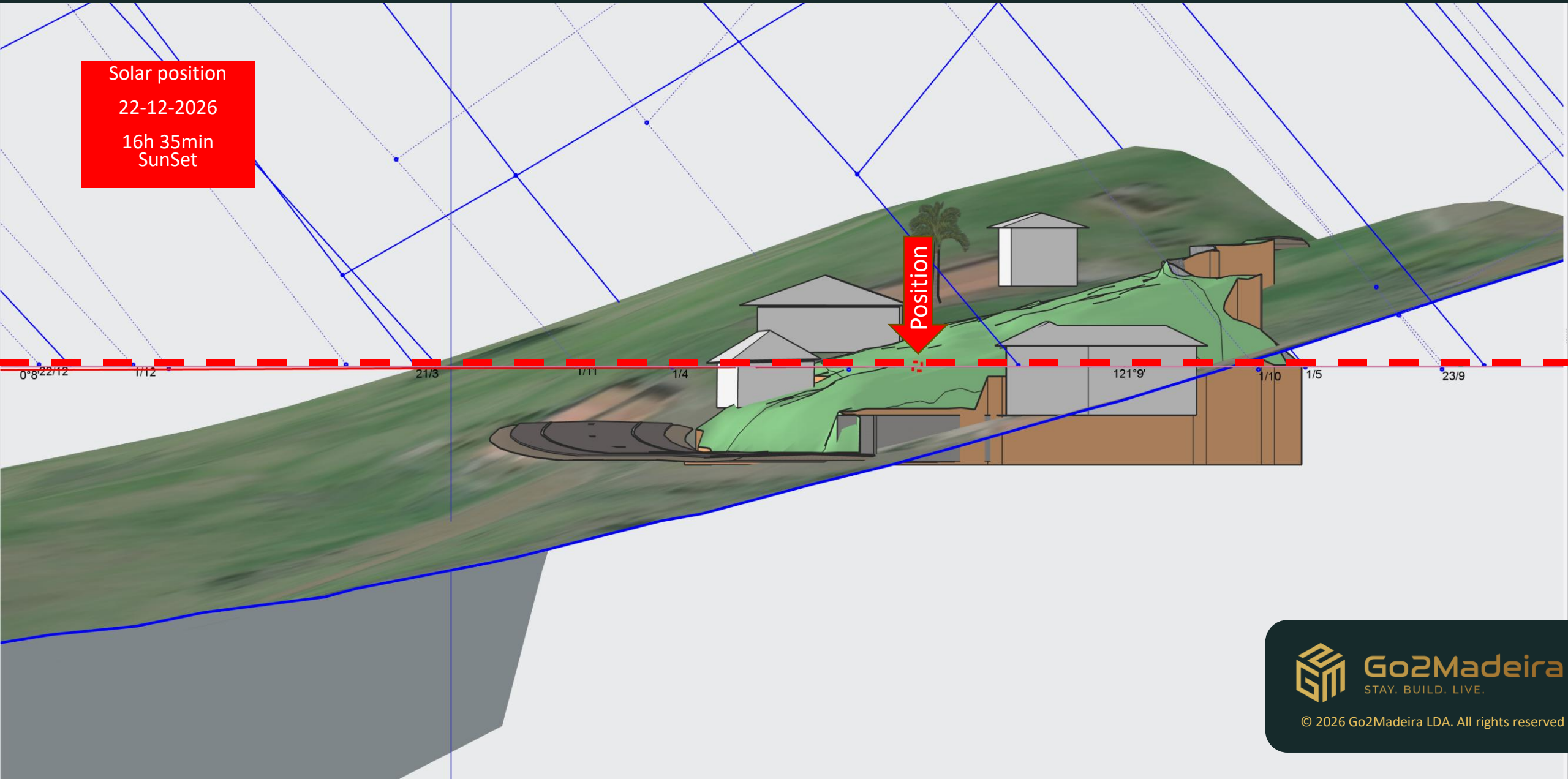
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

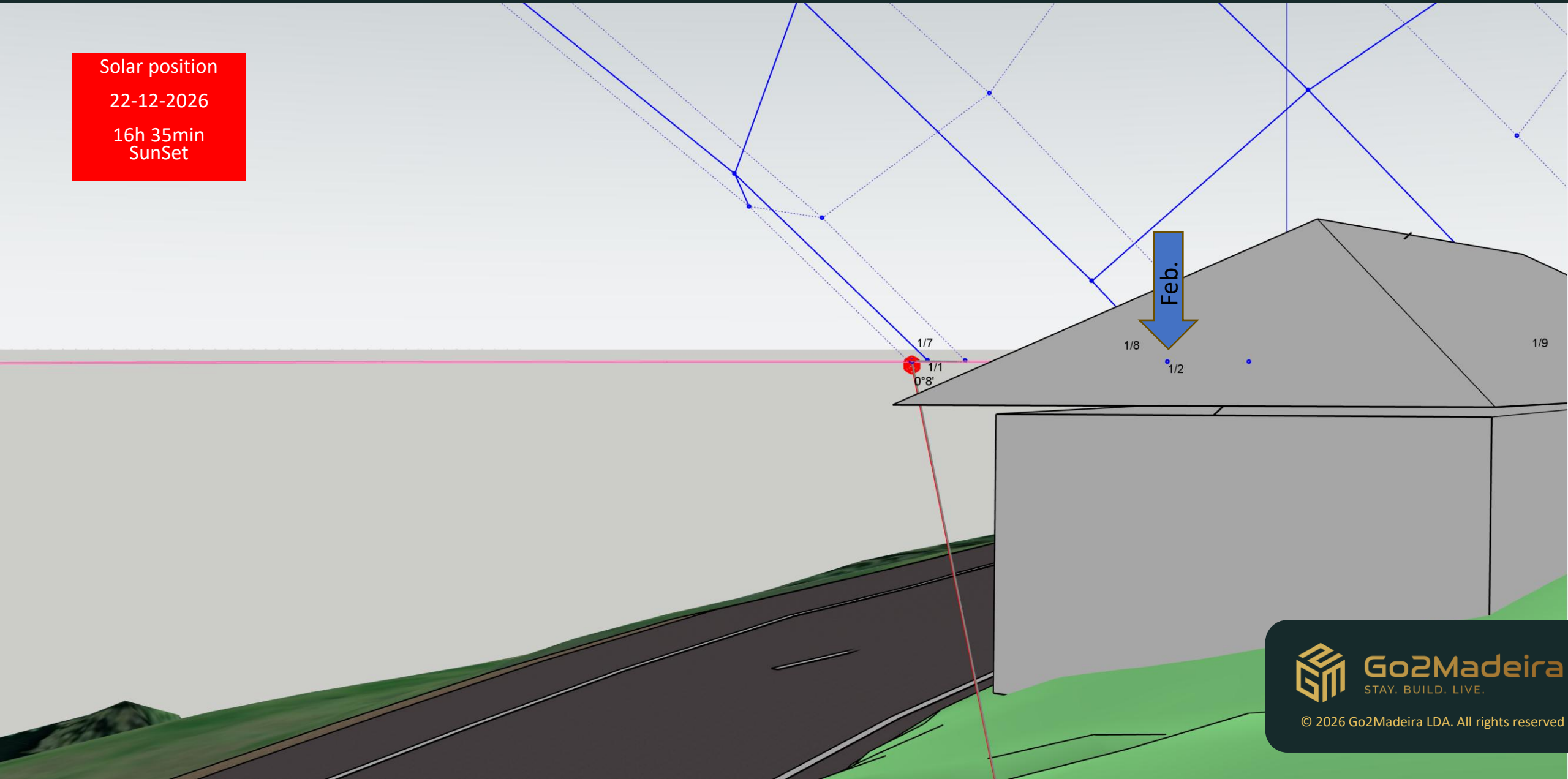
© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data

Solar position

22-12-2026

16h 35min  
SunSet



**Go2Madeira**  
STAY. BUILD. LIVE.

© 2026 Go2Madeira LDA. All rights reserved

# Solar Study Estimation according to the Curic Sun data



**Go2Madeira**  
STAY. BUILD. LIVE.

© 2026 Go2Madeira LDA. All rights reserved



# Go2Madeira

STAY. BUILD. LIVE.

## Part Two : Climate and Seasonal Analysis

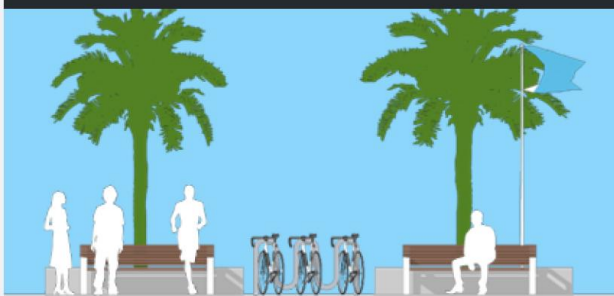
The second part of this study examines the site's climate prevailing winds, temperature, sunlight and potential shading and how the architecture can be adapted to turn these conditions to the building's advantage.

The analysis covers all four seasons, assessed from four perspectives: wind, cold, sun, and potential shade. It concludes with a chart that identifies which technical adjustments should be implemented to maximise outdoor comfort, and in which periods of the year it is best to open the interior to the exterior bringing the outside in, and the inside out.

The result is a clear guide to designing a building that works with the local climate throughout the year, rather than against it.

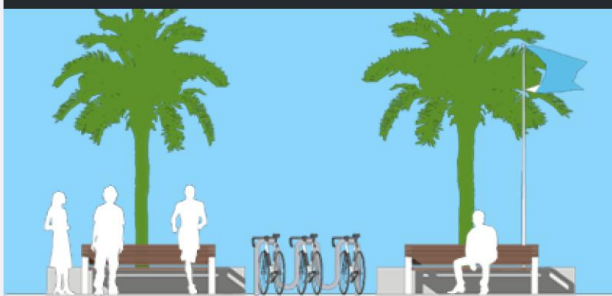
# Impact of climate on architectural response

Dec 21 to Mar 20



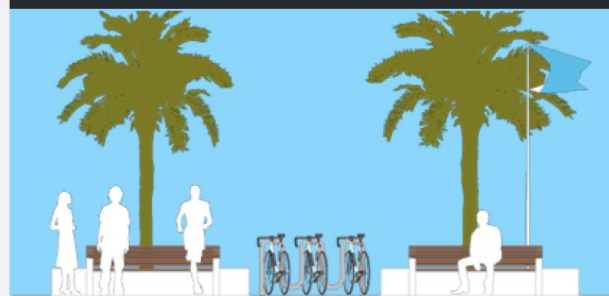
Winter - cool, wet  
Typically fine

Mar 21 to Jun 20



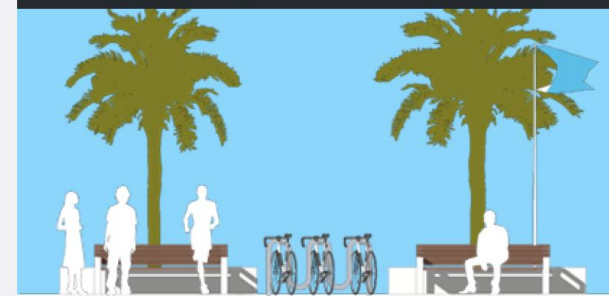
Spring - cool  
Bright and breezy to fine

Jun 21 to Sep 20



Summer - pleasant, dry  
Glorious to bright and breezy

Sep 21 to Dec 20



Fall - cool  
Fine to bright and breezy

## Weather

Avg min  
**15°C**

Avg max  
**16°C**



Overwhelmingly breezy  
Rarely calm or strong winds



Low precipitation  
(51 mm over 7 days)



No snow

Avg min  
**16°C**

Avg max  
**18°C**



Mainly breezy  
Occasionally strong winds,  
rarely calm



Low precipitation  
(92 mm over 14 days)



No snow

Avg min  
**20°C**

Avg max  
**22°C**



Overwhelmingly breezy  
Rarely strong winds or  
calm



Negligible precipitation



No snow

Avg min  
**18°C**

Avg max  
**20°C**



Mainly breezy  
Rarely strong winds or  
calm



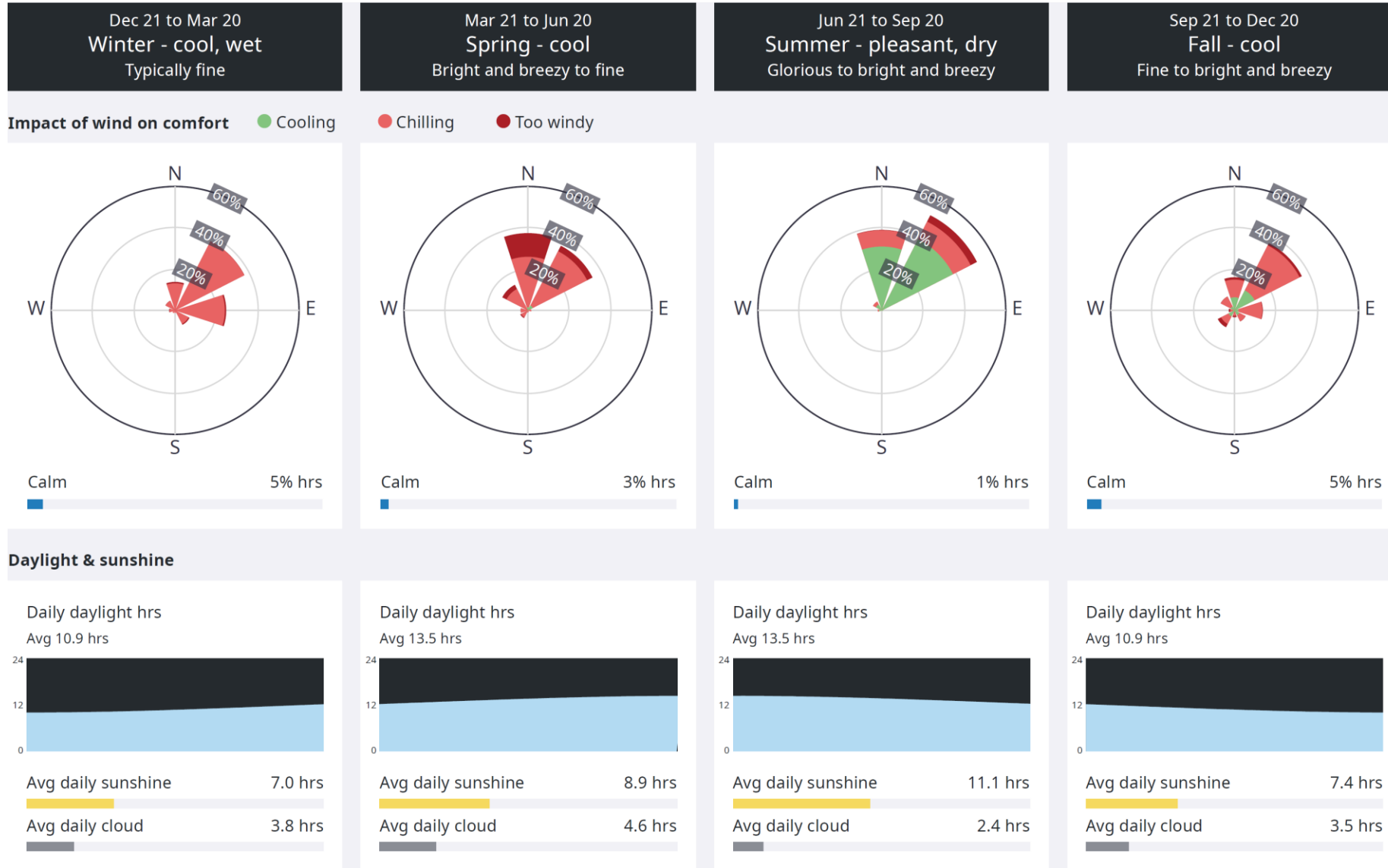
Meaningful precipitation  
(157 mm over 15 days)



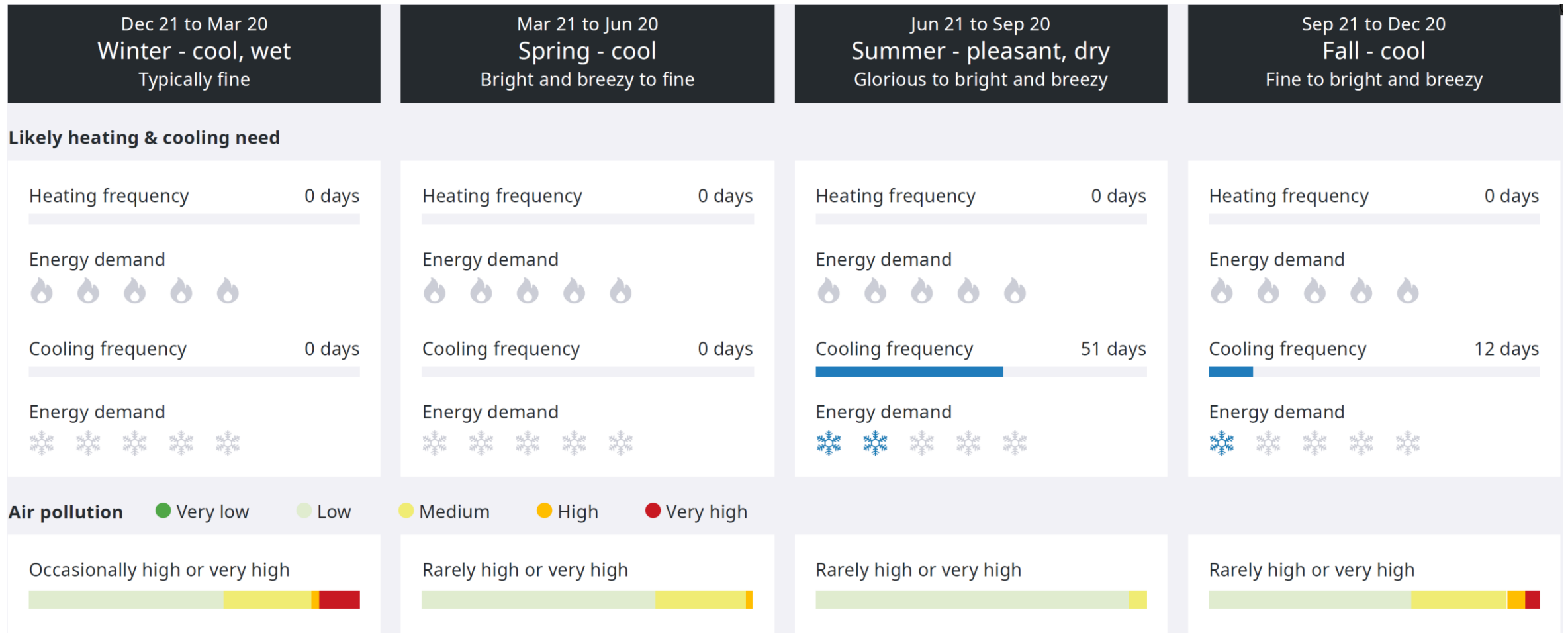
No snow



# Impact of climate on architectural response



# Impact of climate on architectural response



# Impact of climate on architectural response

## OK outside if sheltered



**Frequency** (Occupied hrs)



### What it's like:

- Still but chilly
- Breezy and cool
- Windy but pleasant

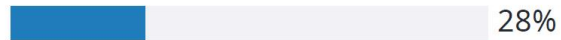
### What most humans want:

- Shelter when needed
- Some connectivity with outside

## Want to be outside



**Frequency** (Occupied hrs)



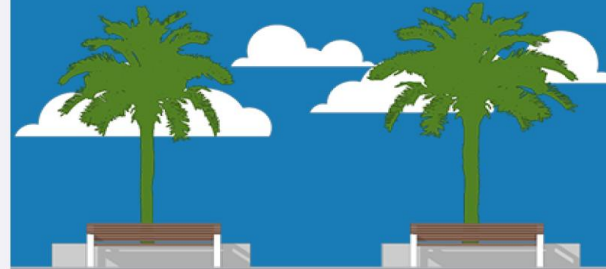
### What it's like:

- Pleasant or warm
- Breezy or calm, not windy

### What most humans want:

- To be outside
- To enjoy the weather

## Too cold to be outside



**Frequency** (Occupied hrs)



### What it's like:

- Breezy and chilly
- Still and cold (or colder)

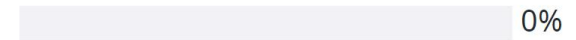
### What most humans want:

- Shelter from the wind
- Warmth

## Too hot to be outside



**Frequency** (Occupied hrs)



### What it's like:

- Warm but windy
- Hot (or hotter)

### What most humans want:

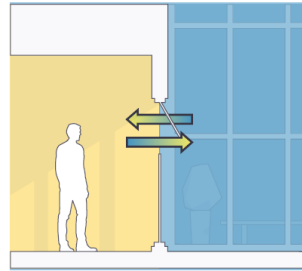
- Protection from the wind & sun
- To be cool



# Impact of climate on architectural response

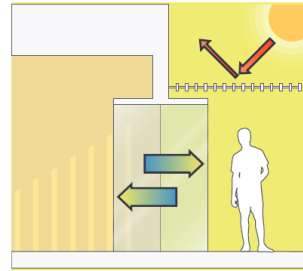
## Bring the outside in

- Controlled openings for natural ventilation
- Sheltered outside spaces like courtyards & atriums
- Larger glazing ratios
- Shading as needed



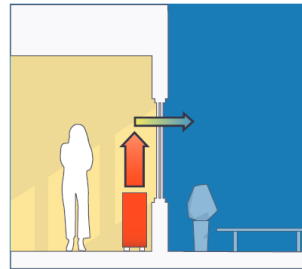
## Take the inside outside

- Large openings to connect inside with outside
- Shaded outside areas as alternative to inside space
- Larger glazing ratios
- Shading where needed



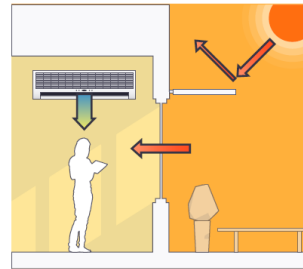
## Provide shelter from the cold

- Well-insulated glazing and envelope
- Good control of infiltration
- Massings with limited articulation
- Efficient & comfortable heating systems



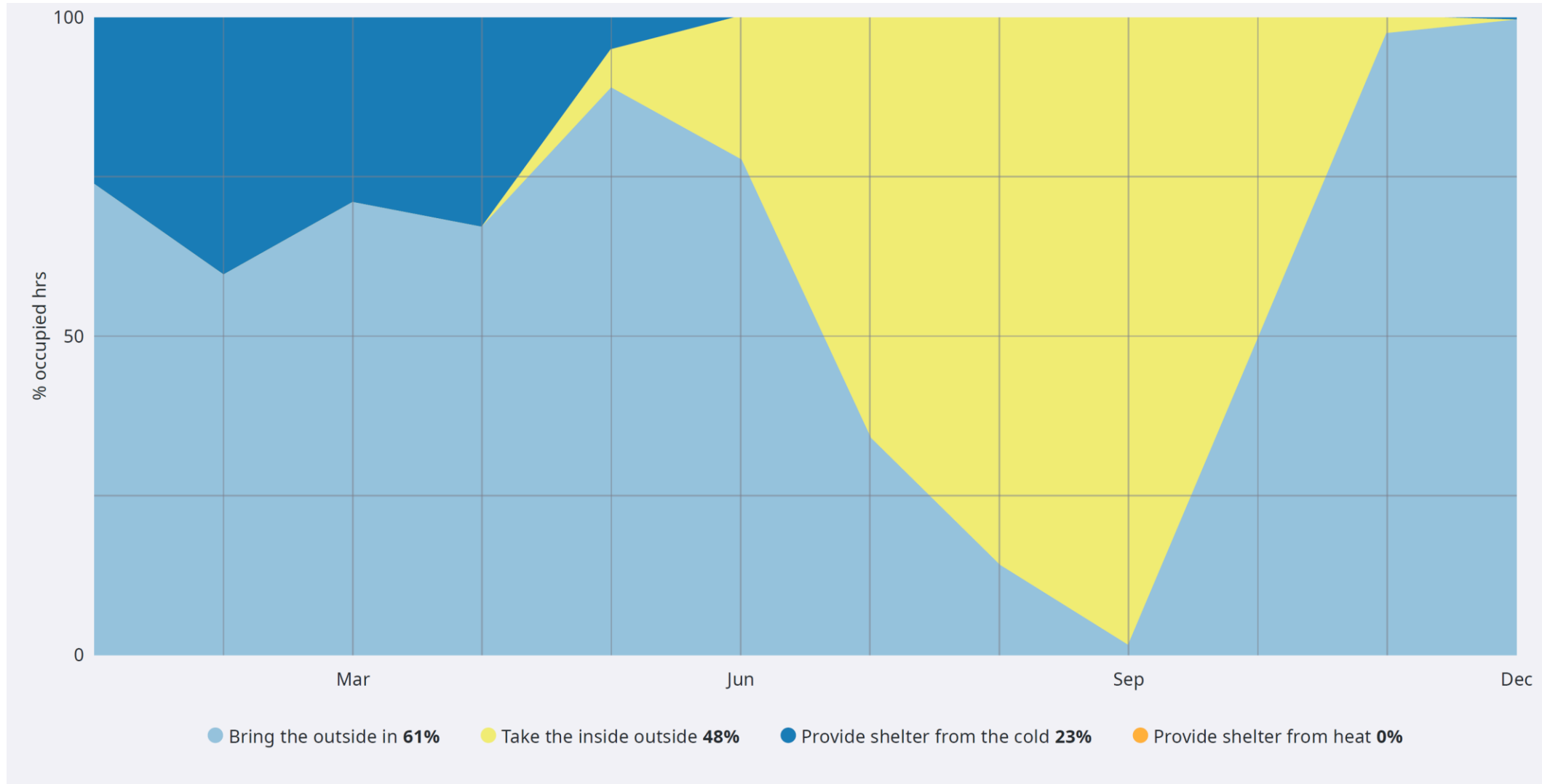
## Provide shelter from heat

- Shaded glazing with solar control
- Limited unprotected glazing
- Efficient indoor cooling systems
- Shaded outdoor areas with fans and possibly misting



# Impact of climate on architectural response

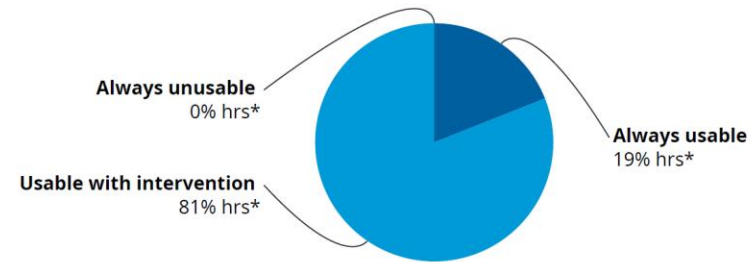
When architectural responses are most important



# Impact of climate on architectural response

## How often outside space is usable

An outside space in this location without intervention will have limited use for seated periods of 20 minutes or more.

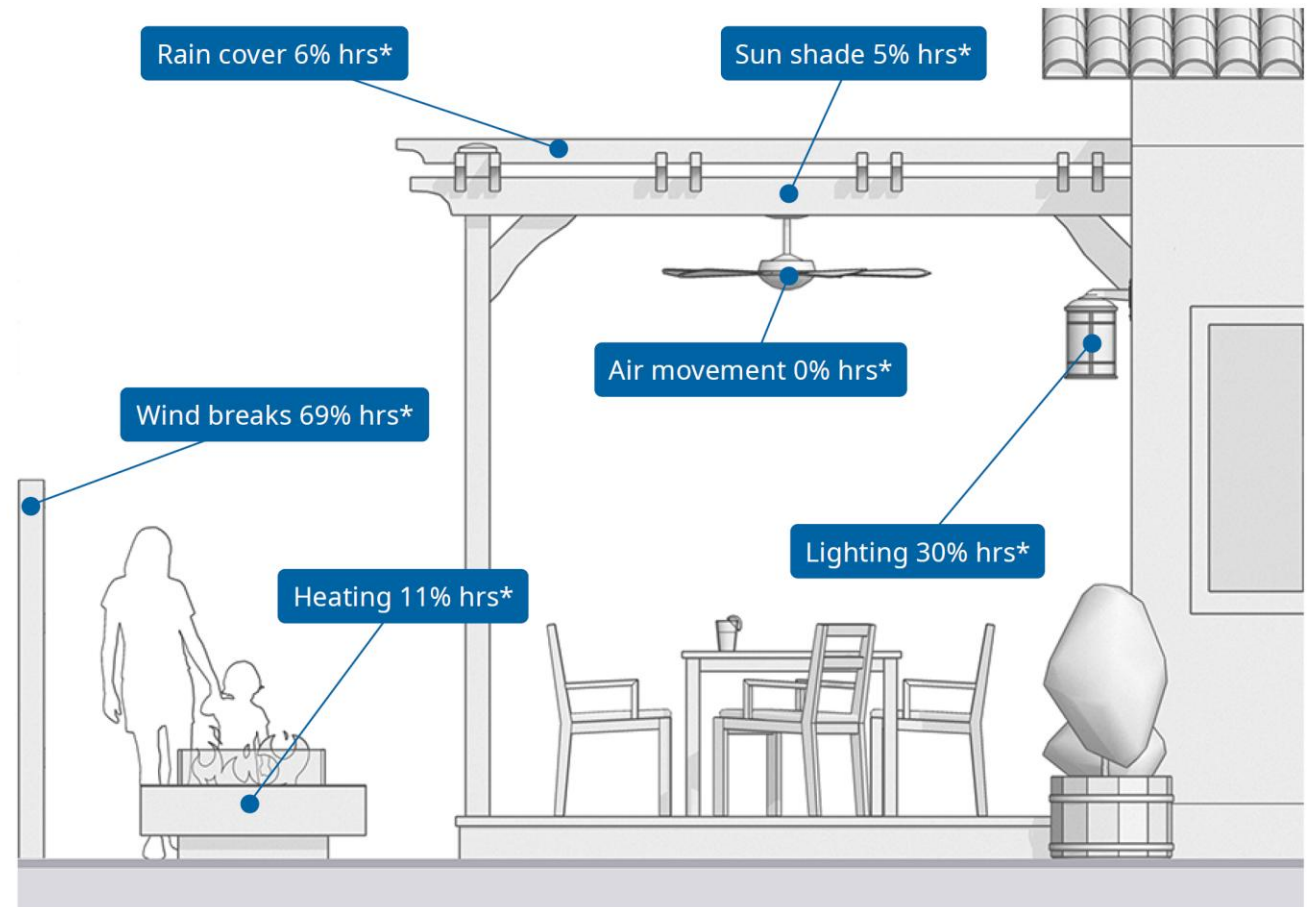


\* Annual occupied hrs

### Overall recommendation

- Combine wind breaks with lighting and heating (+70% hrs\*)

### Maximum intervention usability





Go2Madeira

STAY. BUILD. LIVE.