

**LANDWISE**  
Land Intelligence Services

3D SketchUp Model

- ARCHITECTURAL
- STRUCTURAL
- SANITARY
- MECHANICAL
- ELECTRICAL
- INTERIOR

FOR SUBMISSION

FOR TENDER

FOR CONSTRUCTION

FOR CLIENT

**LANDWISE**  
Land Intelligence Services

25 March 2026

LAND ANALYSIS  
LEAD:

LICENCED  
SURVEYER:

DOCUMENT PHASE:

Package 2 - Land Visibility  
Report

**A.**

**BUILDING REGULATIONS — GREEN ZONE (LAND BELOW 80 M ELEVATION)**

**Zone Classification**

- Green Zone (Koh Pha-ngan Community Town Plan B.E. 2558/2015)

**Maximum Building Height**

- 12 meters maximum

**Maximum Building Footprint**

- Up to 300 sqm per building

**Maximum Development Area**

- Slopes up to 35° → Up to 70% development area (Residential)
- Slopes 35°–49° → Maximum 25% development area, footprint capped at 80 sqm per building

**Slope Restrictions**

- Slopes over 49° are generally considered unsuitable for construction
- Approximately 80% of the site lies within the buildable ≤35° tier; the remaining ~20% is steep (35°+) and is best reserved as landscape buffer

**Planning Notes**

- Low-density hillside development encouraged
- Buildings should follow the natural terrain
- Large excavation or major terrain reshaping discouraged
- Multiple smaller structures are often preferred over one large structure
- Detailed slope analysis is recommended to determine final buildable areas

**LandWise Summary**

This land falls within the Green Zone hillside development category below 80 m elevation, which allows relatively flexible development compared to higher elevation zones. Buildings of up to 12 m height and 300 sqm footprint per structure are permitted where slopes remain below 35°.

Residential development may utilize up to 70% of the site area, although practical design constraints such as terrain slope, access, drainage, setbacks, and infrastructure typically reduce the final buildable footprint.

Development should follow the natural hillside terrain and maintain low-density tropical architecture consistent with Koh Phangan planning guidelines.

Land Size: 2,212 m<sup>2</sup> (Chanote — 1 rai 1 ngan 53 sq wah / 553 sq wah)

Maximum Build Footprint: 300 m<sup>2</sup> per structure

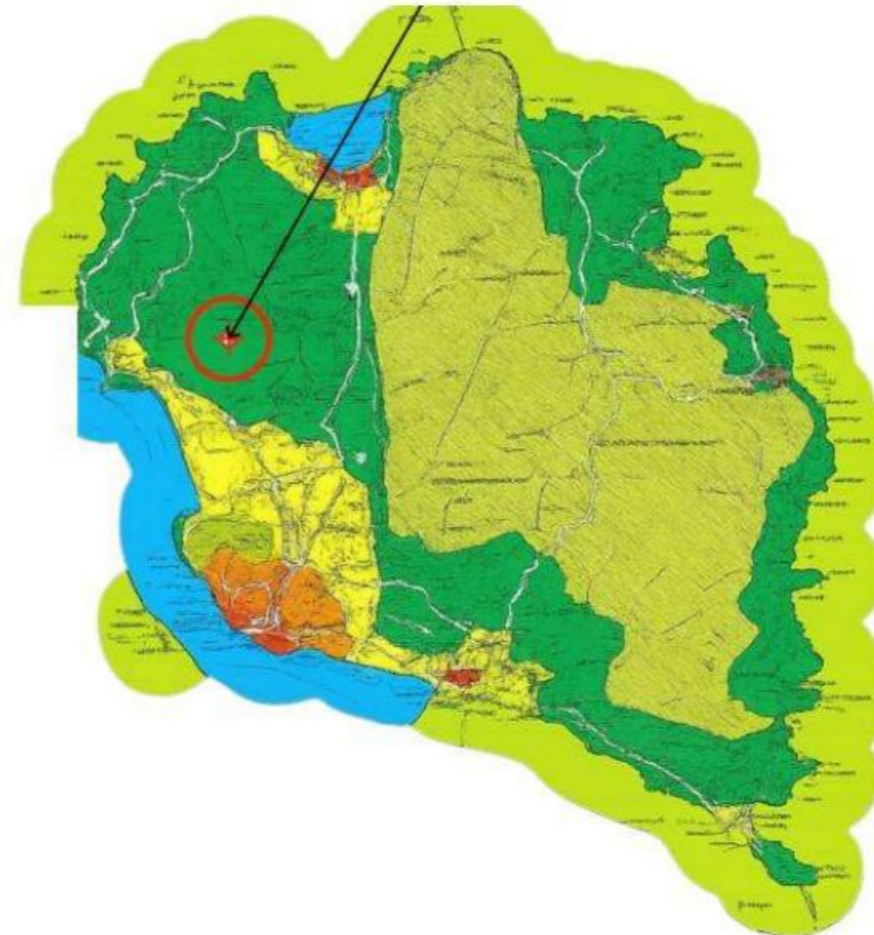
Elevation Zone: Below 80 m

Maximum Building Height: 12 m

Maximum Development Area: Up to 70%

$2,212 \times 0.70 (70\%) = 1,548 \text{ m}^2$

Land Location: Cocon Koh Phangan, Thailand  
Zone: Green



LAND ANALYSIS LEAD:

LICENCED SURVEYER:

DOCUMENT PHASE:

Package 2 - Land Visibility Report

## MASTERPLAN CONCEPT

This masterplan presents a concept feasibility layout for a private villa residence positioned within the buildable area of the 2,212 m<sup>2</sup> land parcel. The layout has been developed to align with the natural terrain, optimize spatial efficiency, and ensure compliance with Koh Phangan Green Zone development regulations.

## VILLA CONFIGURATION

The proposed scheme is designed as a modern tropical residence. Final villa areas (ground floor, pavilion, swimming pool and terrace / outdoor deck) are to be confirmed by the project architect.

The configuration allows for generous indoor-outdoor living, maximizing usability, comfort, and integration with the surrounding landscape.

## SITE PLANNING STRATEGY

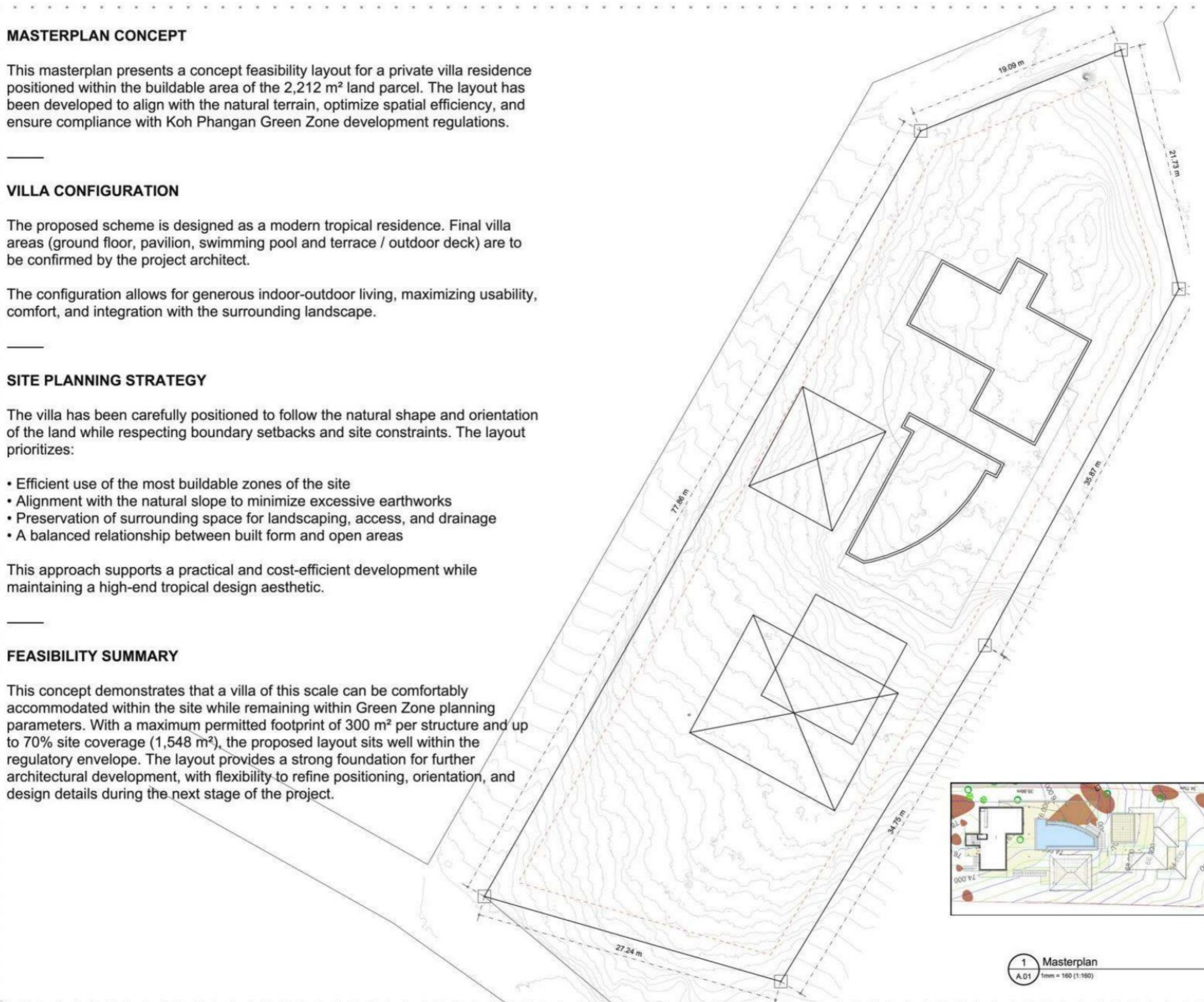
The villa has been carefully positioned to follow the natural shape and orientation of the land while respecting boundary setbacks and site constraints. The layout prioritizes:

- Efficient use of the most buildable zones of the site
- Alignment with the natural slope to minimize excessive earthworks
- Preservation of surrounding space for landscaping, access, and drainage
- A balanced relationship between built form and open areas

This approach supports a practical and cost-efficient development while maintaining a high-end tropical design aesthetic.

## FEASIBILITY SUMMARY

This concept demonstrates that a villa of this scale can be comfortably accommodated within the site while remaining within Green Zone planning parameters. With a maximum permitted footprint of 300 m<sup>2</sup> per structure and up to 70% site coverage (1,548 m<sup>2</sup>), the proposed layout sits well within the regulatory envelope. The layout provides a strong foundation for further architectural development, with flexibility to refine positioning, orientation, and design details during the next stage of the project.



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Masterplan

1 Masterplan  
A.01 1mm = 160 (1:160)

# A.01

**SECTION ANALYSIS**

This front section illustrates how the development presents toward the south-west, with the structures arranged across stepped levels that follow the natural fall of the land.

**ELEVATION STRATEGY**

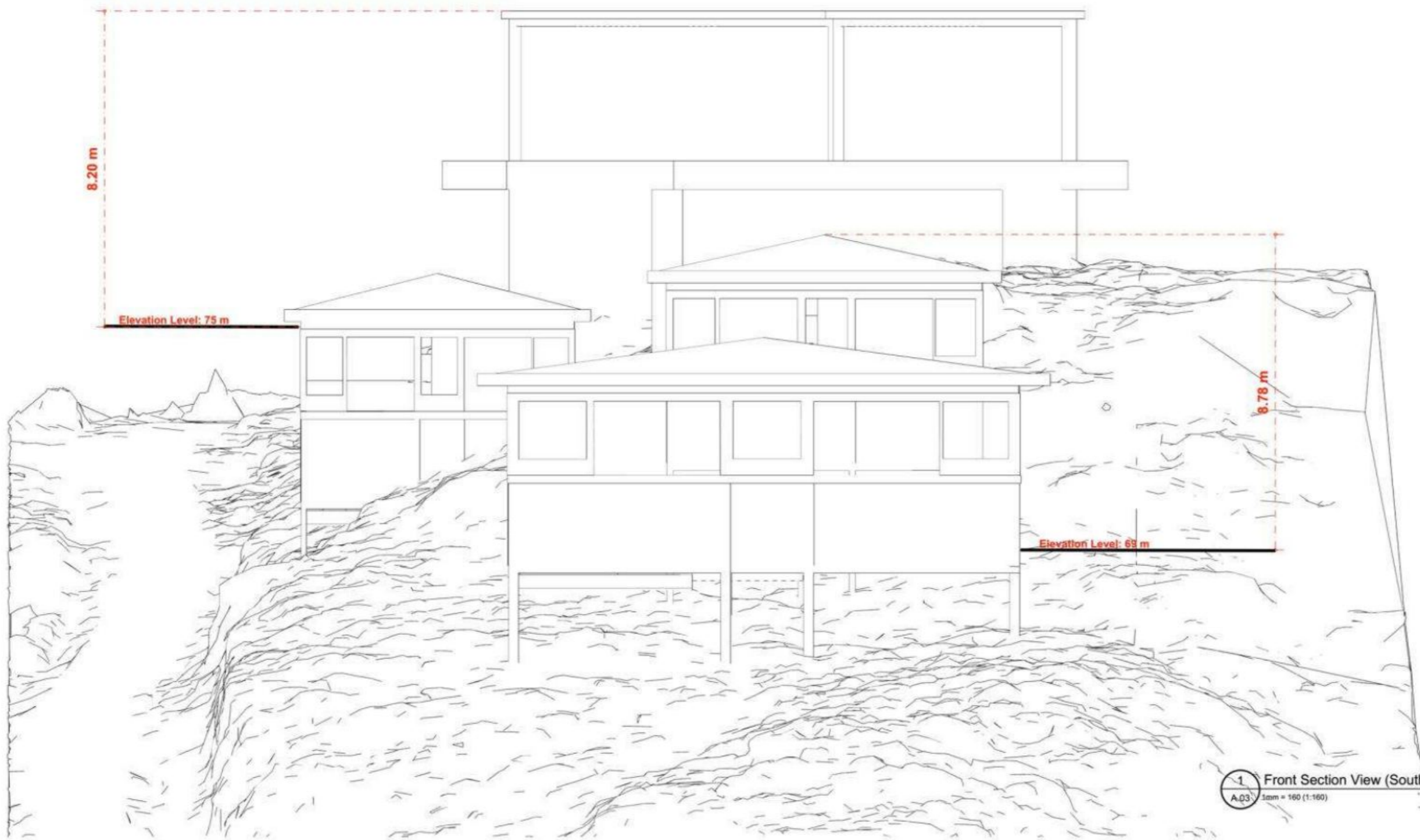
The design adopts a terraced, post-supported approach, raising the lower structures on columns to follow the gradient and minimize cut and fill on the steep slope.

**VIEW CORRIDORS**

The stepped massing keeps the upper structure clear above the lower, maintaining open south-west sightlines toward the sea from each level.

**SITE FEASIBILITY**

The section confirms that the site can support a stepped, elevated hillside development, providing a practical and buildable foundation for further design and engineering.



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**Front Section  
View (South-West)**

**A.03**

SECTION ANALYSIS

This side section illustrates how the development steps down the natural slope, with the structures set across descending elevations — from approximately 75 m at the upper level to 69 m at the lower — to follow the terrain.

ELEVATION STRATEGY

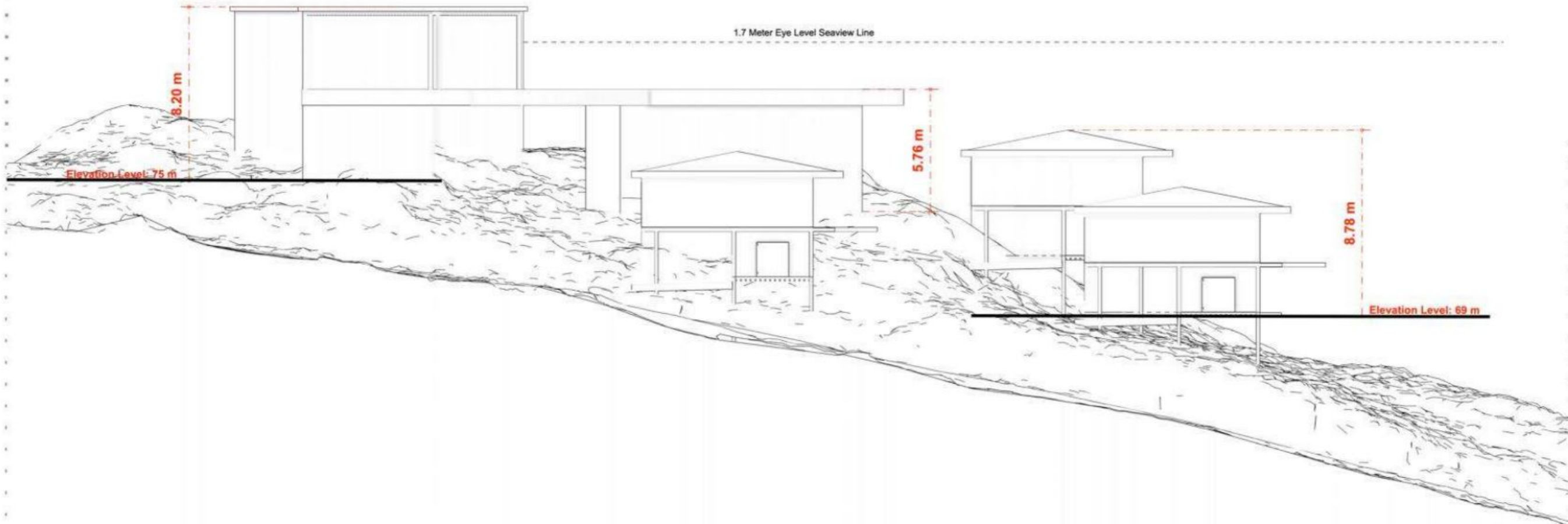
The design adopts a terraced, post-supported approach, elevating the downhill side of each structure on columns to minimize cut and fill and allow the buildings to sit lightly on the steep gradient.

VIEW CORRIDORS

The staggered spacing and stepped levels maintain clear sightlines across the site, preserving open north-west outlooks from each structure without one building obstructing another.

SITE FEASIBILITY

The section confirms that the site can support a stepped, elevated hillside development, providing a practical and buildable foundation for further design and engineering.



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Side Section  
View (North-West)

A.02

1 Side Section View (North-West)  
A.02 1mm = 160 (1:160)

607860.000 607880.000 607900.000 607920.000 60794

607860.000 607900.000 607920.000 60794

1078780.000

1078760.000

1078740.000

1078720.000

60794

1078760.000

1078740.000

1078720.000

# LANDWISE

Terrain Intelligence

## TOPOGRAPHIC CONTOUR MAP

### PROJECT DETAILS

Date: 20 May 2026  
Survey: Drone Photogrammetry  
CRS: EPSG-32647  
Contour Interval: 0.5m  
Index Interval: 1.0m  
Elevation: 55.5m - 78.8m  
Relief: 23.3m  
Total Contours: 47  
Index: 23 | Intermediate: 24

### LEGEND

- Contours
- Index Contours
- Intermediate Contours
- ▬ Land Boundary

0 5 10 15 m



Coordinate System: EPSG:32647  
Contour Interval: 0.5m

## SLOPE ANALYSIS

### PROJECT DETAILS

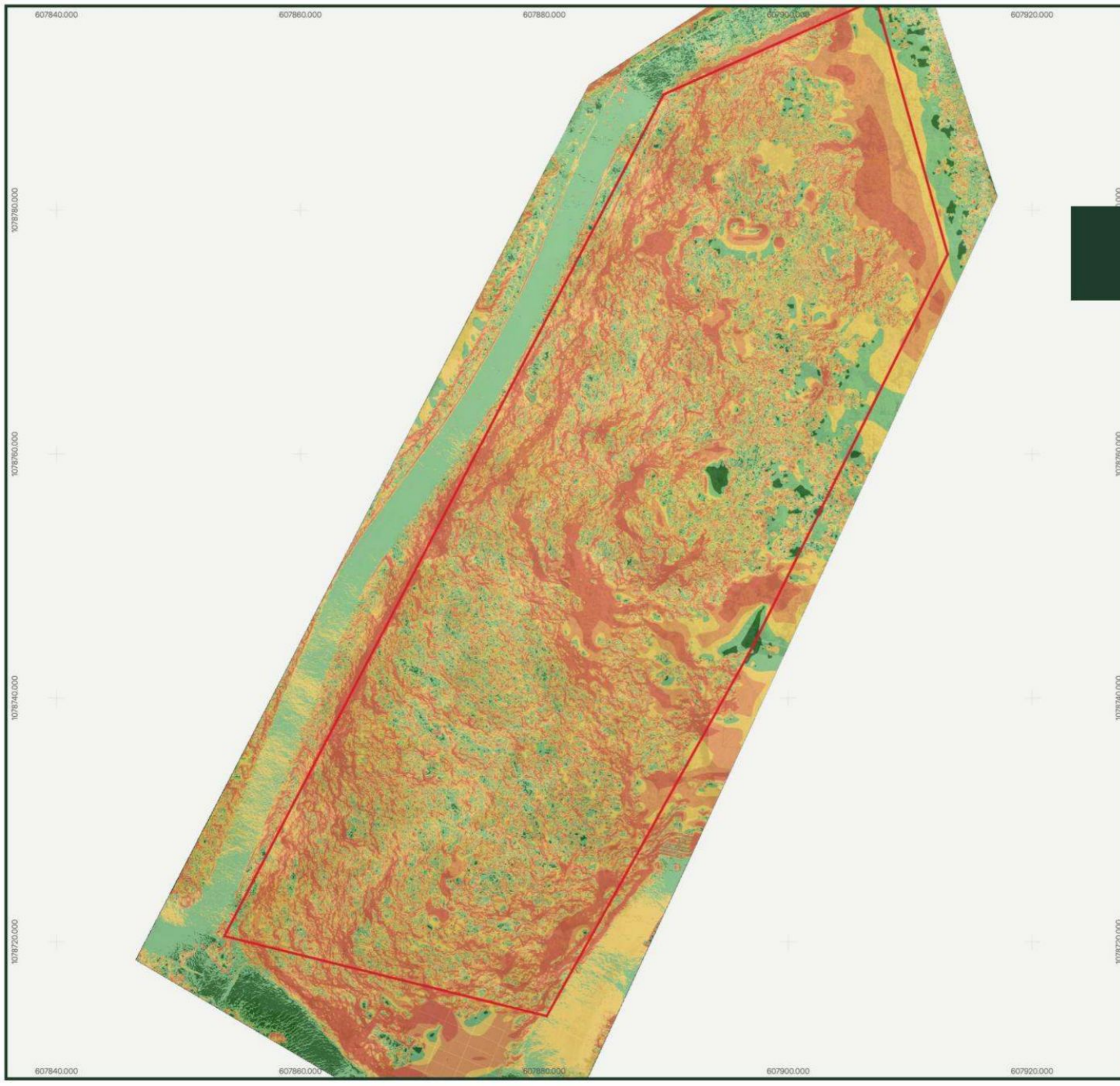
Date: 20 May 2026  
Survey: Drone Photogrammetry  
CRS: EPSG:32647  
Elevation: 55.5m - 78.8m  
Relief: 23.3m

### LEGEND

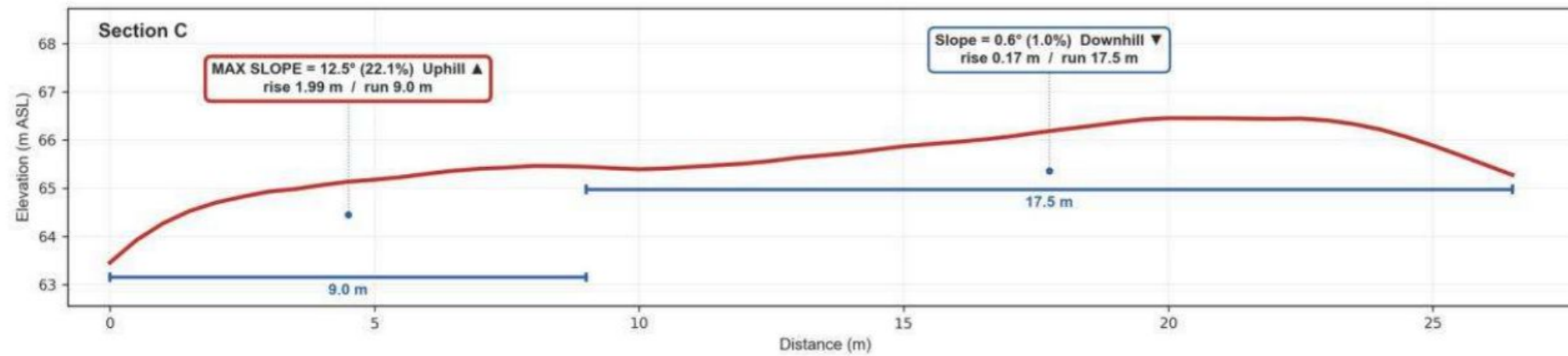
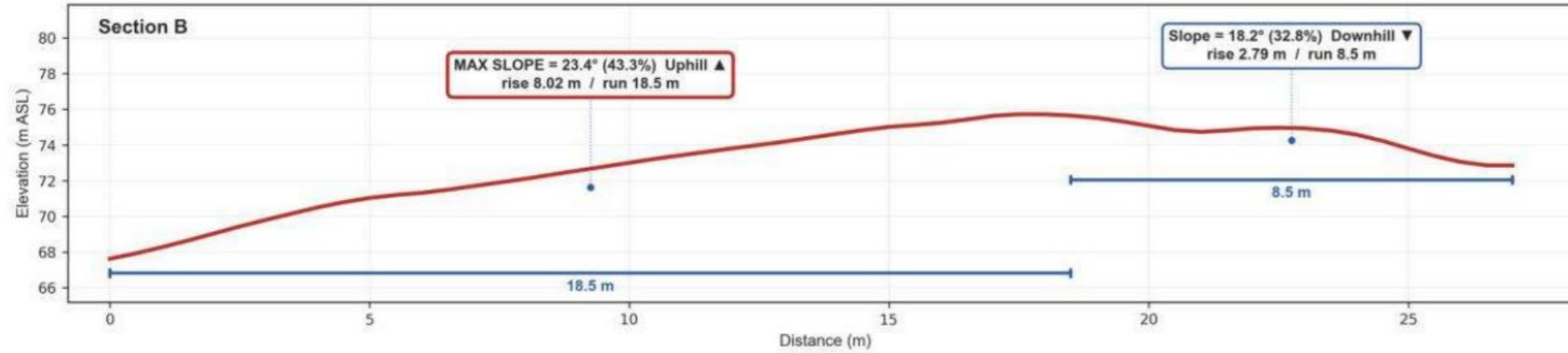
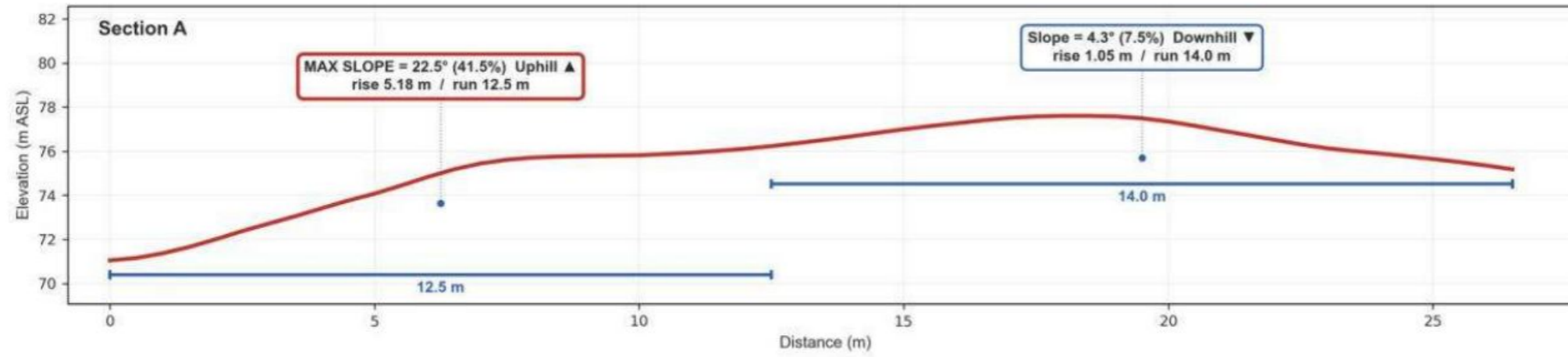
- Flat / Buildable (0-5°)
- Gentle Slope (5-15°)
- Moderate Slope (15-25°)
- Steep (25-35°)
- Very Steep (35°+)



Coordinate System: EPSG:32647  
Grid Interval: 20 units



**SLOPE PROFILE ANALYSIS**



**PROJECT DETAILS**

Date: 20 May 2026  
CRS: EPSG:32647  
Source: DTM (Bare Earth)  
Profiles: 3 cross-sections  
Sample step: 0.5 m

**PROFILE SUMMARY**

**Section A:**  
Length: 26.5 m  
Elev: 71.0-77.6m  
Max slope: 22.5° (41.5%)

**Section B:**  
Length: 27.0 m  
Elev: 67.6-75.7m  
Max slope: 23.4° (43.3%)

**Section C:**  
Length: 26.5 m  
Elev: 63.5-66.5m  
Max slope: 12.5° (22.1%)

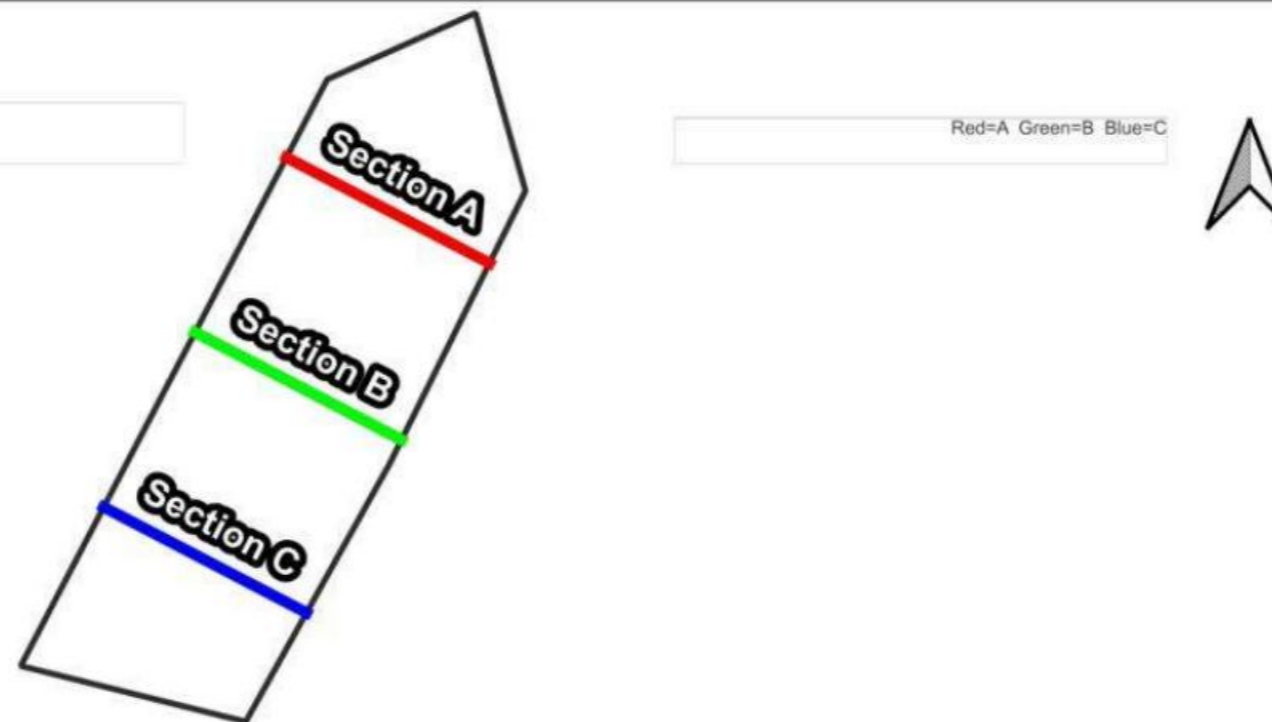
**DATA SOURCE**

Drone-derived DTM  
(Photogrammetry)

Elevations are relative and  
for planning analysis only.

Survey confirmation required  
for final design.

**PROFILE LOCATION MAP**



**SOLAR ORIENTATION & EXPOSURE**

**PROJECT DETAILS**

Date: 21 May 2026  
Survey: Drone Photogrammetry  
CRS: EPSG:32647  
Elevation: 55.5m – 78.8m  
Relief: 23.3m

**SUN PATH**

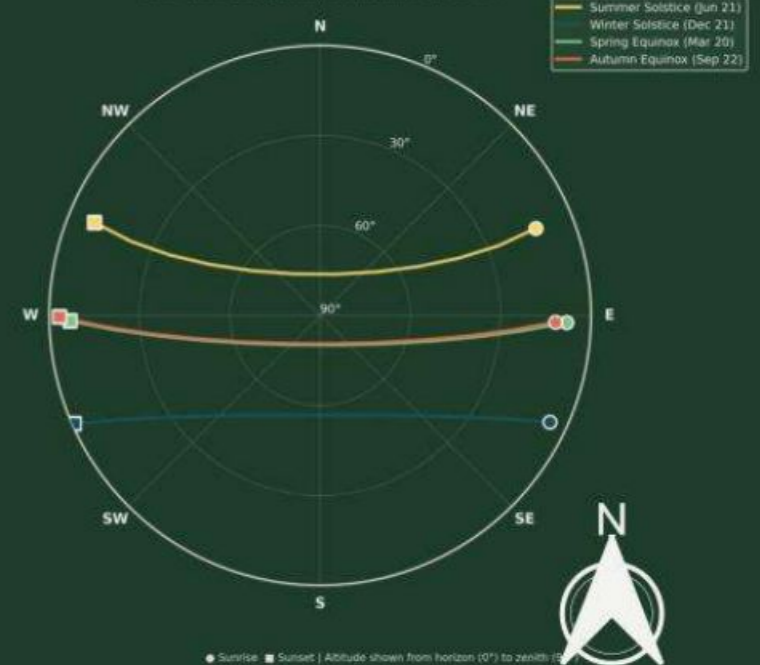
Sunrise: 06:05 UTC+7  
66° (ENE)  
  
Sunset: 18:45 UTC+7  
294° (WNW)  
  
Daylight: 12.7 hours

**LEGEND**

- Neutral Terrain
- Cooler Slopes
- Morning Sun
- Full Sun
- Afternoon Heat

(Summer Solstice data)

Sun Path Diagram \nLatitude: 9.7575°



Coordinate System: EPSG:32647  
Data Interval: 30 mins

**Solar Interpretation**



## DRAINAGE ANALYSIS

Date: 21 May 2026  
Survey: Drone Photogrammetry  
CRS: EPSG-32647  
AOI: 0.755 ha (7552 m<sup>2</sup>)  
Elevation: 55.5 m - 78.8 m  
Relief: 23.3 m  
Mean slope: 52.1 %

Flow method: WhiteboxTools  
Streams: 5379  
Inflow points: 0  
Outflow points: 0  
Unknown xings: 0

Erosion risk: SEVERE  
Drainage: SEVERE

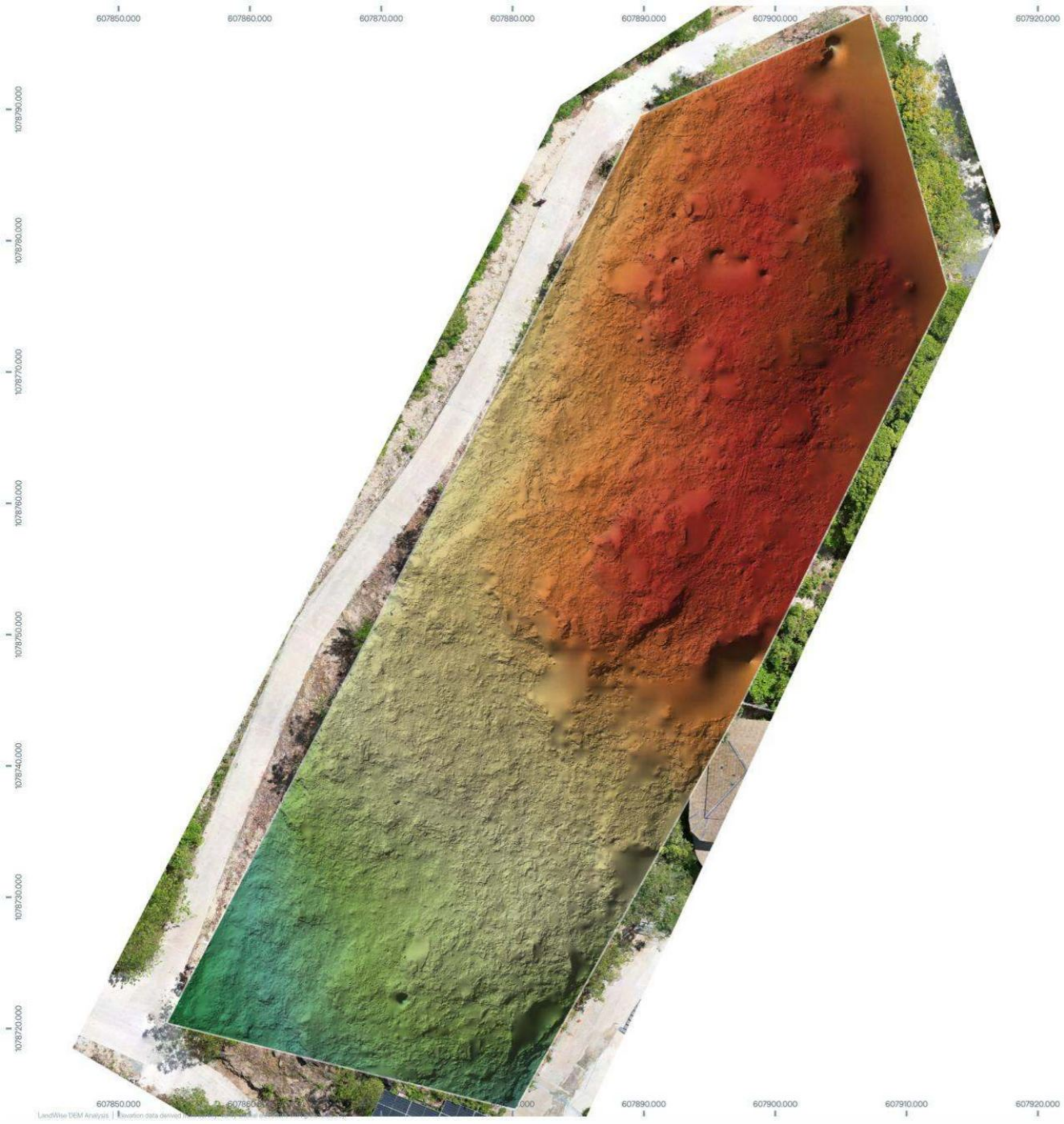
### LEGEND

-  Flow Origins
-  Flow Exits
-  Major Channels
-  Tributaries
-  Detailed Flow
-  Flow Concentration Paths



Coordinate System: EPSG-32647  
Grid: 10 m





## LANDWISE

Land Intelligence Services

## DEM ELEVATION ANALYSIS

### PROJECT DETAILS

Date: 21 May 2026  
Survey: Drone Photogrammetry  
CRS: EPSG:32647  
Resolution: 0.02m

Min Elevation: 56.5m  
Max Elevation: 78.8m  
Mean Elevation: 70.6m  
Relief: 22.3m  
Std Deviation: 5.3m

Analysis: Terrain + Hydrology

### LEGEND

#### Elevation

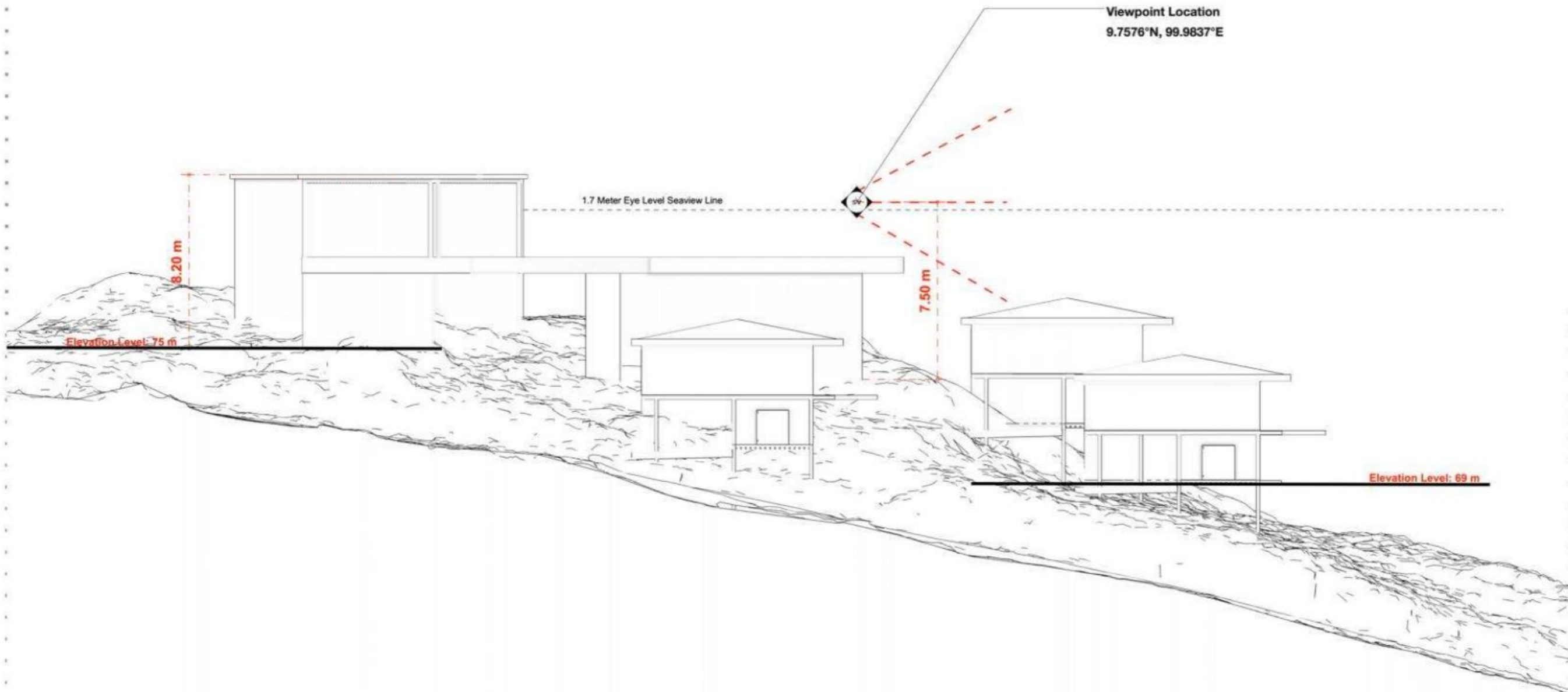


#### Site Boundary



**SEAVIEW VIEWSHED ANALYSIS**

This analysis illustrates the primary viewpoint location and corresponding sightlines, demonstrating how the proposed design aligns with and preserves key seaview orientations.



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Side Section  
View (North-West)

1 Side Section View (North-West)  
A.04 1mm = 160 (1:160)

**A.04**

## Real Site View + Real Terrain 3d Model

On-site photographic reference (1.70 m eye level) integrated with the terrain-based massing model to verify real-world view alignment, elevation relationship, and design positioning.



Raw Terrain + Massing Model

Preliminary visualization used for analysis and positioning.











# LANDWISE — REPORT SUMMARY

This report was prepared to evaluate the dev

as, alongside

conditions.

The analysis included:

- Drone-based terrain modelling and orthophoto mapping
- Terrain slope, longitudinal profile and DEM elevation analysis
  - Solar orientation and surface drainage assessment
  - Feasibility testing for a stepped hillside villa layout
- Sea view viewshed assessment from the primary viewpoint
- Neighbouring building comparison and real-site view alignment

Key Findings

- The site follows a steep hillside profile (elevation 55–79 m, relief 23 m) suitable for stepped development.
- Terrain and section analysis confirm the land can accommodate a terraced, post-supported villa layout aligned with the natural slope.
  - Viewshed analysis indicates strong, clear sea views from the primary living level, preserved above the lower structures.
  - Surface water concentrates across the steep gradient, so drainage and erosion control require attention at design stage.

Recommendations

- Position main living areas at the identified primary viewpoint level.
  - Maintain elevation advantage to protect long-term views.
- Align design with the natural terrain to reduce earthworks, and incorporate stormwater management on the steep slope.

LANDWISE — REPORT SUMMARY

Thank you for choosing LANDWISE — Land Intelligence Services.

This report provides clear analysis of terrain, slope, drainage and visibility, confirming that the site can support a well-positioned hillside development with strong and protected sea-view corridors.

Terms, Limitations & Disclaimer (Important)

This report is provided for conceptual planning, visualization, and decision-support purposes only.  
All analysis is based on available survey data, drone models, terrain processing, and interpreted regulations at the time of reporting.  
LANDWISE does not provide legal, architectural, engineering, or certified surveying services.  
This report must not be used as a legal document, construction approval document, or regulatory submission.  
Final design, legal verification, structural design, and compliance approvals must be completed by licensed professionals and relevant authorities.  
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