

Thai Land Measurement Mastery Guide

DECIPHERING THE RAI, NGAN, AND SQUARE WAH
(2026 EDITION)



Prepared by Eran Milo

REGIONAL DIRECTOR OF REMAX THAILAND & VICE PRESIDENT OF TREBA

Navigating Thai real estate requires mastering a dual-measurement system that often confuses international investors. In Thailand, **Land** is measured using a traditional Thai system (Rai, Ngan, Wah), while **Buildings** (Condos, Houses, and Interiors) are measured using the Metric system (Square Meters). Understanding the conversion between these two is vital for accurate valuation and legal due diligence. This mastery guide provides the technical framework to ensure you never miscalculate the scale of your investment or the area recorded on your Title Deed.

1. The Traditional Thai Land Units

The Thai government officially uses three units for land measurement: the **Rai**, the **Ngan**, and the **Square Wah** (also known as Talang Wah). These units are hierarchical and do not follow the base-10 logic of the metric system. If you are buying a villa, a plot of land, or a commercial development, these are the only units that will appear on the front of your "Chanote" (Title Deed).

THE RAI

The largest standard unit. One Rai is approximately 0.4 acres or 1,600 Square Meters. It is the primary unit for large estates and agricultural plots.

THE NGAN

The middle unit. There are exactly 4 Ngan in 1 Rai. One Ngan equals 400 Square Meters.

THE SQUARE WAH

The base unit. There are 100 Square Wah in 1 Ngan. One Square Wah equals exactly 4 Square Meters.

2. The Metric Standard: Square Meters (SQM)

While the land beneath a property is measured in Thai units, the **building area**—including condominium units, internal floor area of houses, and office spaces—is exclusively measured in **Square Meters (SQM)**. When you see a condo advertised as "50 sqm," that represents the net internal area including walls and balconies, but excluding any shared common areas or the land the building sits on.

❗ CRITICAL DISTINCTION: A "House" sale actually involves two different measurements. You buy the **Land** (e.g., 100 Square Wah) and the **Building** (e.g., 250 SQM of living space). These two are recorded in different sections of the legal documentation.

3. The Official Conversion Matrix

Use this table as your definitive reference for converting Thai land units to the Metric system. This is the logic used by the Land Department for all official calculations.

Thai Unit	Metric Conversion	Western Conversion
1 Square Wah	4 SQM	43.05 Sq. Feet
1 Ngan (100 Wah)	400 SQM	0.098 Acres
1 Rai (4 Ngan)	1,600 SQM	0.395 Acres
6.25 Rai	10,000 SQM	2.47 Acres (1 Hectare)

4. Reading the Title Deed (Chanote)

The front page of a Thai Title Deed (the red garuda *Chanote*) lists the land area in the top right corner. It is formatted as three numbers: **[Rai] - [Ngan] - [Square Wah]**. For example, a entry of ****1 - 2 - 50**** means:

1 RAI 1,600 SQM	+ 2 NGAN 800 SQM	+ 50 WAH 200 SQM
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Total Land Area: 2,600 Square Meters

5. Mastery of Condominium Unit Space

Unlike land title deeds, a Condominium Unit Title Deed (the blue garuda) lists the area strictly in ****Square Meters****. However, this measurement includes only the private area. It does not include the proportionate share of the common land or shared facilities. When reviewing a condo's "Sale Price per SQM," ensure you are calculating based on the official SQM recorded on the unit deed, not the gross floor area of the building.

Q SURVEY TIP: If you are buying land for development, always hire an independent surveyor to verify the Thai units recorded on the Chanote. It is common for older deeds to have slight discrepancies of 5-10 SQM when converted to modern laser-GPS measurements.

6. Valuation Logic: Price per Wah vs. Price per SQM

Investors use different metrics depending on what they are buying. Mastering these definitions allows you to compare deals across different regions of Thailand effectively.

LAND PLOTS (PRICE PER WAH)

Vacant land is almost always priced "Per Square Wah." If a plot is 100,000 THB per Wah, it is equivalent to 25,000 THB per SQM. This is the standard for Bangkok prime real estate.

CONDOS (PRICE PER SQM)

Apartments are priced "Per Square Meter." This allows for global comparison. High-end Bangkok condos in 2026 range from 200,000 to 500,000 THB per SQM.

7. Building Coverage & FAR Rules

Understanding land measurement is critical for understanding what you can legally build. Thai zoning laws use **Floor Area Ratio (FAR)** and **Open Space Ratio (OSR)**. These are ratios based on your land area in SQM (converted from Thai units).

- ✓ **FAR:** Defines the total floor area of a building relative to the land size. (e.g., if FAR is 10:1 on 1 Rai (1,600 sqm), you can build 16,000 sqm of total floor space).
- ✓ **OSR:** Defines how much of your land must remain "uncovered" or green. A 10% OSR on 1 Rai means 160 sqm of the land cannot be built upon.
- ✓ **Setbacks:** The distance between the building and the land boundary, often measured in meters.

8. Common Measurement "Red Flags"

When reviewing a listing, always ask if the "House Size" includes carports and swimming pools. Developers often inflate the SQM by including outdoor terrace space. REMAX Thailand mandates that all exclusive listings distinguish between **Internal Living Area** and **Total Built-up Area** to ensure transparency.

CALCULATION CASE STUDY

"A villa sits on a plot of 200 Square Wah with a building area of 350 SQM."

To find the building-to-land ratio, first convert 200 Wah to SQM ($200 \times 4 = 800$ SQM). The building covers $350/800$ or 43% of the total land area. This is a vital metric for assessing "luxury" versus "density."

9. The Mastery Checklist

Before finalizing any land or property purchase, verify these three measurement variables. Accuracy here prevents future legal disputes regarding boundary lines and construction permits.

DEED VERIFICATION

- ✓ **Rai-Ngan-Wah:** Matches the listing description?
- ✓ **Official Scan:** Verify deed markers (Pillar numbers).
- ✓ **Land History:** Check for historical subdivision errors.

BUILDING VERIFICATION

- ✓ **Internal Area:** Confirmed in the Tabien Baan?
- ✓ **Gross vs Net:** Does SQM include common areas?
- ✓ **Encroachment:** Does building stay inside the Wah?

10. Legal Disclaimer & Requirement of Counsel

Disclaimer: The information and conversions provided in this Mastery Guide are for general informational purposes only. While every effort has been made to ensure accuracy (2026 Edition), Thai land measurements can vary by region and individual Land Office records. Discrepancies between historical paper records and modern digital measurements are common.

Requirement of Counsel: Because real estate boundaries and land usage rights are technically complex, **REMAX Thailand strongly recommends that all clients retain a professional surveyor and independent legal counsel** to verify physical land markers and Title Deed data before executing a Sale and Purchase Agreement.

A Measured Conclusion

"Precision is the foundation of a safe property investment. By mastering the relationship between Thai land units and metric building area, you move from a casual buyer to a sophisticated investor. At REMAX Thailand, we provide the data-driven clarity needed to ensure every square meter of your investment is accounted for. I invite you to leverage our technical expertise for your next transaction."

WHY PLAN WITH REMAX THAILAND?

- ★ Precise Land Conversion Analytics
- ★ Independent Surveyor Network
- ★ Technical Due Diligence Support
- ★ TREBA-Certified Data Management

REMAX Thailand

REMAX Thailand © 2026 Nasa Street Shopping Mall
Ramkhamhaeng Road Suanluang, Bangkok 10250

☎ **02-038-5868**

✉ info@remax.co.th

☎ AI: +66910042870

📱 @remax