

EXECUTIVE SUMMARY & OVERALL RISK VERDICT

SITE UNDER ANALYSIS

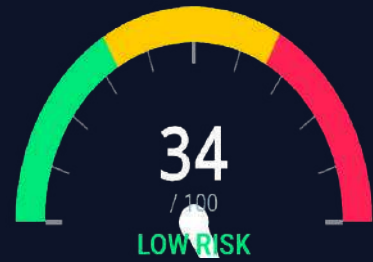
[Redacted Site Name]

Project: Commercial Development

Coordinates: [Redacted Coordinates]

Generated: 1/5/2026, 6:35:10 pm

Data: Open-Meteo ERA5 USGS Open-Elevation OpenStreetMap/Nominatim



ALGORITHMIC RISK ASSESSMENT:

Statistical probability from public satellite archives (NASA/ESA/USGS) not field-verified measurements.

QUICK RISK INSIGHTS

FLOOD RISK

LOW

Return period: >15 years  
4 extreme rain days / 10 yrs

SEISMIC ZONE

Zone III

IS 1893-2016 Classification  
Moderate Risk

ELEVATION ASL

215m

Slope: 0.36  
River: LOW proximity

OVERALL RISK VERDICT

Low Risk Probability Relatively Safer Location

Analysis indicates lower risk probability. Risk Score: 34/100. Standard construction with full local building code compliance recommended.

KEY RISK INDICATOR TILES SATELLITE-DERIVED DATA

FLOOD PROBABILITY

LOW RISK

ELEVATION & SLOPE

215m ASL

SEISMIC RISK ZONE

IS Zone III

SOIL & VEGETATION

Deep Alluvial

ENGINEERING RECOMMENDATIONS & LEGAL DISCLAIMER

SITE: [REDACTED] PROJECT: COMMERCIAL RISK SCORE: 34/100 DATE: 1 May 2026

ENGINEERING RECOMMENDATIONS

1. Elevated Ground Floor

Commercial floor area minimum 1.5m above natural ground level. Flood barrier-ready entrance design. Lobby and basement areas require waterproof tanking.

2. Critical Systems Placement

Electrical panels, server rooms, and HVAC systems must be on first floor or above never at basement or ground level in flood-probability zones.

3. Structural Compliance

Zone-appropriate seismic detailing for all RCC structures. Regular structural health monitoring recommended for commercial assets in high-risk zones.

4. Legal & Insurance

Obtain Flood Zone NOC from local authority. Commercial property flood insurance mandatory. Disclose risk probability to tenants as part of lease agreements.

PRE-CONSTRUCTION PROFESSIONAL CONSULTATION CHECKLIST

Licensed Geotechnical Engineer soil bearing capacity test

Structural Engineer foundation design per IS:1893 seismic zone

District Land Records Office title verification, encumbrance certificate

Flood NOC from District Disaster Management Authority (DDMA)

Local Municipality building plan approval and setback confirmation

Drainage Engineer stormwater management plan for monsoon season

### DATA SOURCES, ATTRIBUTION & LEGAL DISCLAIMER

DATA SOURCES: Weather & Climate Open-Meteo ERA5 Reanalysis (open-meteo.com), Elevation NASA SRTM 30m DEM via Open-Elevation, Earthquake USGS FDSNWS API, Seismic Zone BIS IS 1893-2016, Geocoding OpenStreetMap / Nominatim (CC-BY-SA).

LIMITATION OF LIABILITY: This report uses publicly available data. If any data is found inaccurate, the developer (Thoiba Trader / GeoAudit) bears no responsibility, as all data is sourced from public-domain APIs maintained by NASA, ESA, USGS, and OpenStreetMap.

NOT A LEGAL OR ENGINEERING CERTIFICATE: This report does not constitute a legal, financial, geotechnical, or structural engineering certificate. Thoiba Trader shall not be held liable for any financial loss, construction damage, or legal dispute arising from reliance on this report.

All risk scores are statistical probabilities derived from historical satellite archives not ground-truth field measurements. For legal land due diligence, consult: (1) District Land Records Office, (2) Licensed Geotechnical Engineer, (3) Legal Advocate specializing in property law.

For investment-grade decisions, commission a licensed geotechnical engineer and obtain India Meteorological Department (IMD) station data for 30+ year local rainfall analysis.

NASA SRTM

ESA Sentinel-1/2

USGS Earthquakes

Open-Meteo ERA5

OpenStreetMap

Open-Elevation