

Building Sustainability Rating

AI Assessment Summary:

The building achieves a fair rating primarily due to its remarkably low energy consumption footprint and existing rainwater harvesting. However, it suffers from poor thermal design, inefficient glazing, and a lack of renewable energy integration, common in mid-2010s Pune residential stock.

Current Rating



Fair – Room for improvement

Potential Rating (After Improvements)



Good – Above average sustainability

+30 points improvement

Before & After Comparison:



Before



After (AI Generated)

Applied Changes:

Here is your improved, photorealistic, vibrant, and lively visualization of the balcony with all the sustainability recommendations applied!

Apply SRI (Solar Reflective Index) high-albedo paint to the balcony ceiling and exterior wall surfaces.

Cost: ₹3,000 - ₹5,000.

Benefits:

- Reduction in thermal mass heat retention
- Lower cooling load for internal rooms
- Increased diffuse natural light indoors

CO₂: 25kg per year

Heat: 15% reduction in radiant heat transfer

Upgrade the current pigeon net to a retractable UV-resistant bamboo chick or high-density sunshade. Estimated cost: ₹2,000 - ₹3,500.

Benefits:

- Provides flexible shading for West-facing evening sun glare
- Maintains cross-ventilation while blocking direct solar radiation
- Biodegradable material alignment with IGBC standards

CO2: 80kg per year

Heat: Moderate reduction in direct solar gain

- ✓ Apply SRI high-albedo paint to the balcony ceiling and exterior wall surfaces
 - ✓ Implement a drip irrigation system for existing potted plants using AC condensate water
-

Estimated Cost

₹9,000 - ₹15,500

Expected Impact

Immediate 2-3°C reduction in indoor temperature and 15% reduction in AC load due to improved insulation and solar reflection.