

Green Building Approach-Case Study

Jadhav Sneha¹, Deshmukh Rohit², Gunjal Harshada³, Darade Pranav⁴, Dhus Shreya⁵, Sangale Jivan⁶

Student, Department of Civil Engineering^{1,2,3,4,5}

Assistant Professor, Department of Civil Engineering⁶

Amrutvahini College of Engineering, Sangamner, India

Abstract: *In recent years, the green building movement has seen significant growth worldwide, and India has also embraced this trend. Green building rating systems have been introduced to set standards for incorporating eco-friendly practices in the construction and operation of buildings. These systems help reduce environmental damage and promote sustainability.[1]*

Buildings are evaluated based on the environmental practices they implement, earning points for each green feature. After assigning appropriate weights, a final score is calculated to determine the building's green rating. This scoring system reflects how extensively sustainable methods have been applied during construction.[2]

Green buildings are designed to minimize water usage, enhance energy efficiency, conserve resources, reduce waste, and provide healthier indoor environments compared to traditional buildings. They make use of renewable energy, eco-friendly materials, and smart design practices to ensure a safe and sustainable living or working space.[3]

Although the upfront cost of building green structures is around 7% higher than conventional ones, the benefits in terms of environmental protection and occupant well-being make the investment worthwhile. Such practices play a vital role in making the construction industry more sustainable and in evaluating buildings through green rating systems.[4]

This study specifically examines the IGBC (Indian Green Building Council) rating framework, which is well-suited to Indian conditions. A case study focused on the pre-construction stage is used to explore how the rating system is applied in practice.[2].

Keywords: Green Building, Rating System, sustainable development, Criteria.[2]

