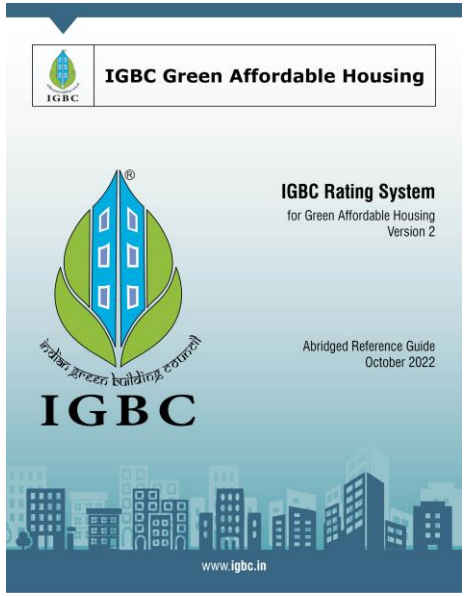
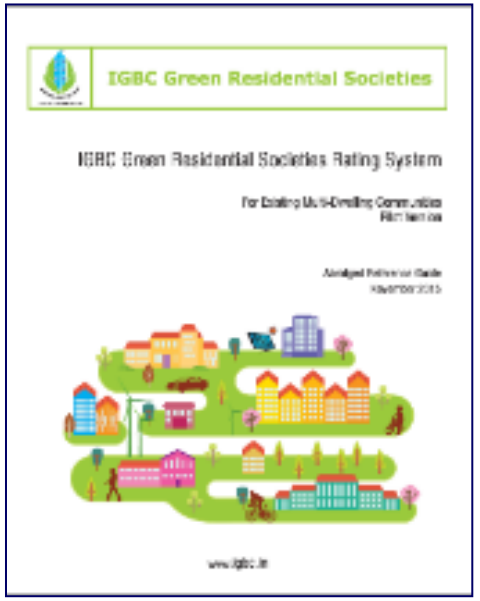
IGBC's NESTPLUS

(Individual Green Homes)

IGBC Initiative - Residential Sector





New Launch

BEE
Star Rating Programme

Energy Conservation
Building Codes (ECBC)

National Building Code
of India

MoEF
Government of India

Eco-Niwas Samhita

Ministry of Housing &
Urban Poverty Alleviation

Rural Housing....

Challenges

- **Lack of standardized design**
- **Quality of Living**
- **Material and Resource Consumption**

Opportunities

- **Tangible Savings**
- **Health and Well-being**
- **Easy Financial Assistance**

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Objective

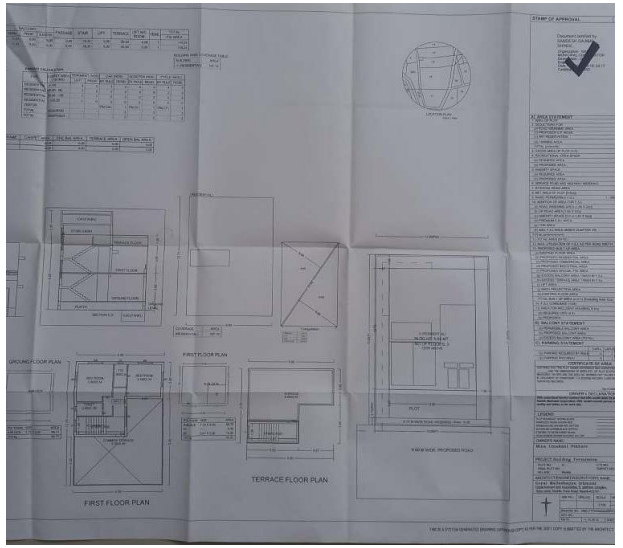
'To facilitate self-developed residential projects to implement green measures and become sustainable and healthy'

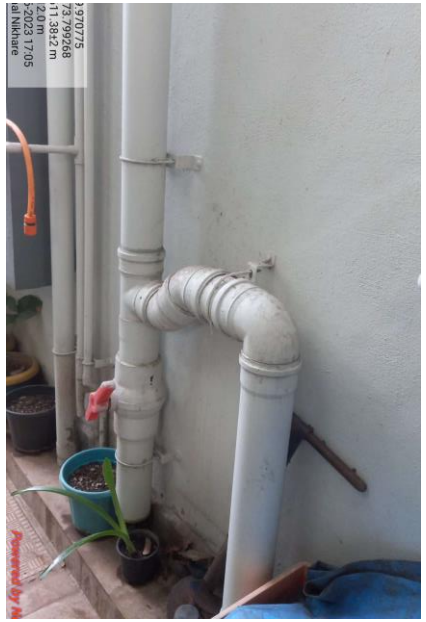
Scope & Applicability

- All individual homes with built up area less than 3,000 sq.ft
- Rating Levels
  - Certified, Silver, Gold
  - Certificate of Award
- Certification based on photographic evidence & checklist based
- Registration & Certification Fee: Rs. 10,000+ taxes

Mandatory Requirements

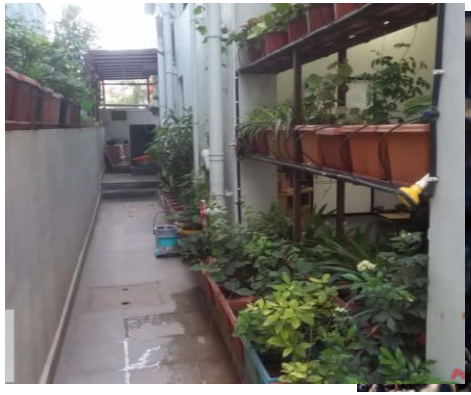
1. Local Building Regulations
2. Waste Segregation of Dry & Wet Waste
3. Rainwater Harvesting: Storage of 500 Liters





Green Building Parameters

- **Passive Architecture**
  - Provide any two features:
    - Courtyard, Vernacular materials, Local Vernacular Elements, Any other passive cooling/Heating system, Skylights
- **Topsoil Preservation**
  - Preserve top 150-200 mm soil during excavation
- **Setbacks**
  - Provide minimum of 3 ft setback or as per local norms whichever is higher
- **Basic Amenities**



Green Building Parameters

- **Vegetation and Natural Topography**
  - Provide the vegetation either on Ground/ built - up structures
- **Vegetables / Fruits - 2 varieties**
  - Grow a minimum of two vegetable/Fruit species.
- **Medicinal Plants- 2 varieties**
  - Grow a minimum of two medicinal species
- **Indoor Plants - 5 Plants**
  - Grow Indoor Plants

Green Building Parameters

- **Vehicle shading**
  - Provide shade for vehicles using either by tree shade or covered parking space
- **Bicycle for commuting**
  - Use at least one bicycle for commuting purpose and provide dedicated parking space
- **E Vehicle/Renewable fuel-based vehicle**
  - Use at least one of the following vehicle type
  - E vehicle, CNG based vehicle, LPG based vehicle, Any other renewable fuel-based vehicle

Green Building Parameters

Best Practices during Construction

- Implement the following measures during the construction
  - Barrication
  - Dust Suppression
  - Material Stacking
  - Drinking Water and First - Aid
  - Designated waste material storage space
  - Soil cover with tarpaulin

White finish

- Use materials with china mosaic/light colored paint/reflective coating/terrace landscaping

Green Building Parameters

- **Enhanced Rainwater Harvesting and Reuse**
  - Capture at least 750 Liters for every entire site area runoff
  - Reuse provision for harvested water
- **Water Saving Fixtures**
  - Provide efficient water fixtures
- **Water Metering, Water Level Controllers**
  - Water metering
  - Automatic water level controllers for Overhead tank

Green Building Parameters

- **Wall:** AAC Blocks/ Fly ash Bricks/Equivalent Thermal Properties
- **Roof:** RCC + Brickbat coba/Filler slabs/Insulation/ Equivalent Thermal Properties
- **Energy Saving Appliances:** LED Light Fixtures, Ceiling Fans (BEE 3 star/BLDC), Min BEE 3 Star rated appliances
- **Sun-shades/Chajjas:** sun-shades/ chajjas of minimum 400mm
- **Alternate Hot Water System**
- **On-site Solar Power:** 0.5 kW, 1.5 kW, 2.5kW
- **Electric vehicle charging**



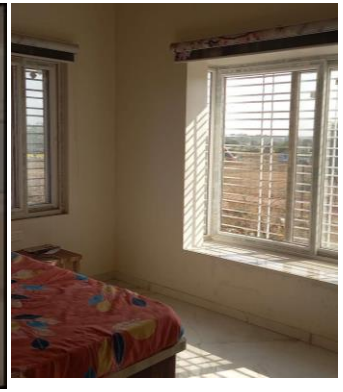


Green Building Parameters

- **Kitchen waste composting**
  - Provide khamba /compost pit for each home.
  - The generated manure shall be utilised as appropriate
- **Green Procurement – Ecolabelled**
  - Use of Green certified/GreenPro Construction Materials
- **Local Materials**
  - Procure the materials from manufacturers within 500 KM range

Green Building Parameters

- **Daylighting**
  - Ensure a minimum daylighting of 110 Lux during the daytime.
- **Ventilation**
  - Provide openable windows to the exterior in all regularly occupied spaces
- **Exhaust System**
  - Provide exhaust systems in kitchen and bathrooms
- **Cross Ventilation**
  - Ensure two openings (window/ventilator) in each space
- **Exterior Views**
  - Ensure connectivity between the interior and exterior spaces to achieve visual delight



Home Automation

- Install the home automation devices / BMS for the items listed below.
  - Air Conditioner / Washing machine
  - Lighting Controls
  - CCTV
  - Solar meter
  - Sensors (Motion, Daylight)
  - IAQ Monitoring
  - Dashboard for Energy and water consumption

Implementation

App based information

Basic calculations
Automated Savings

Geo-tag Photographs

Stage wise

Certification level	New	Existing
Points Available	85	75
Certified	40	35
Silver	50	45
Gold	65	60

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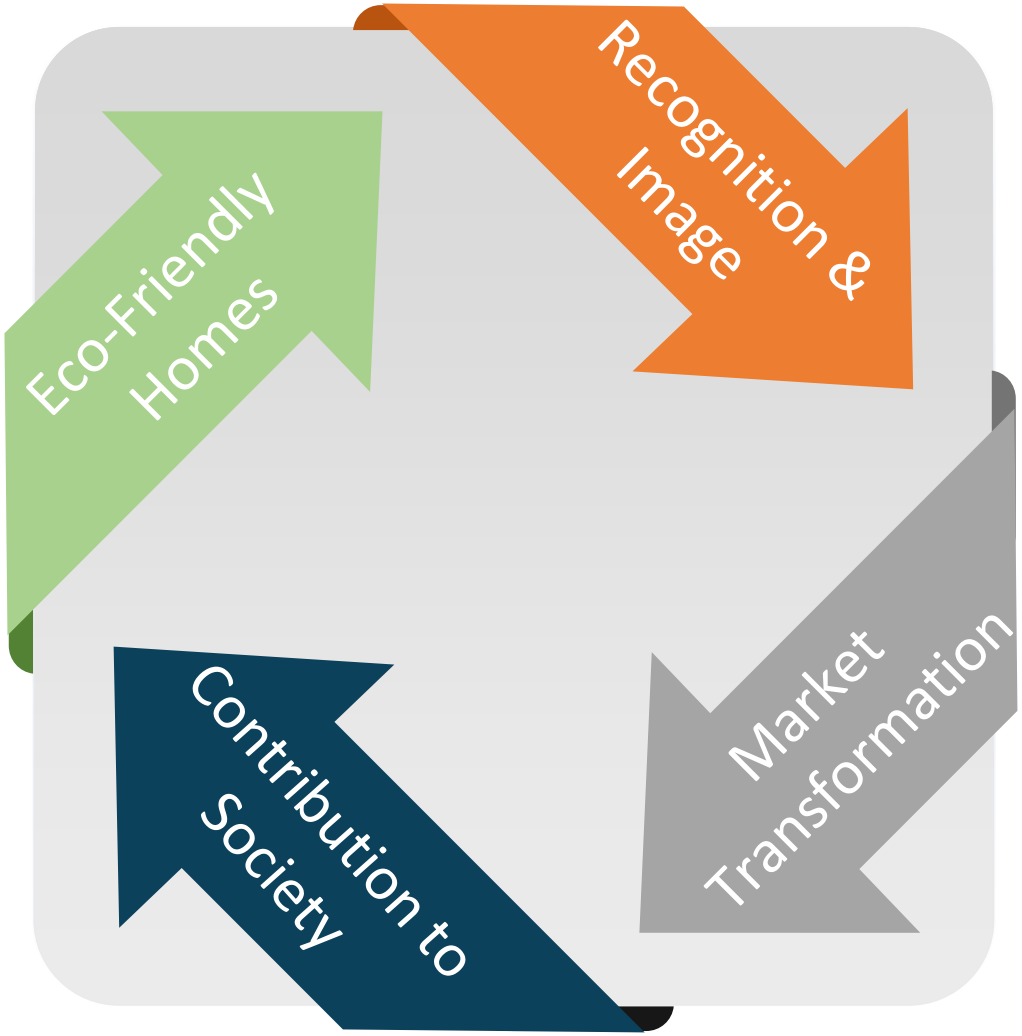
Measures – No Investment

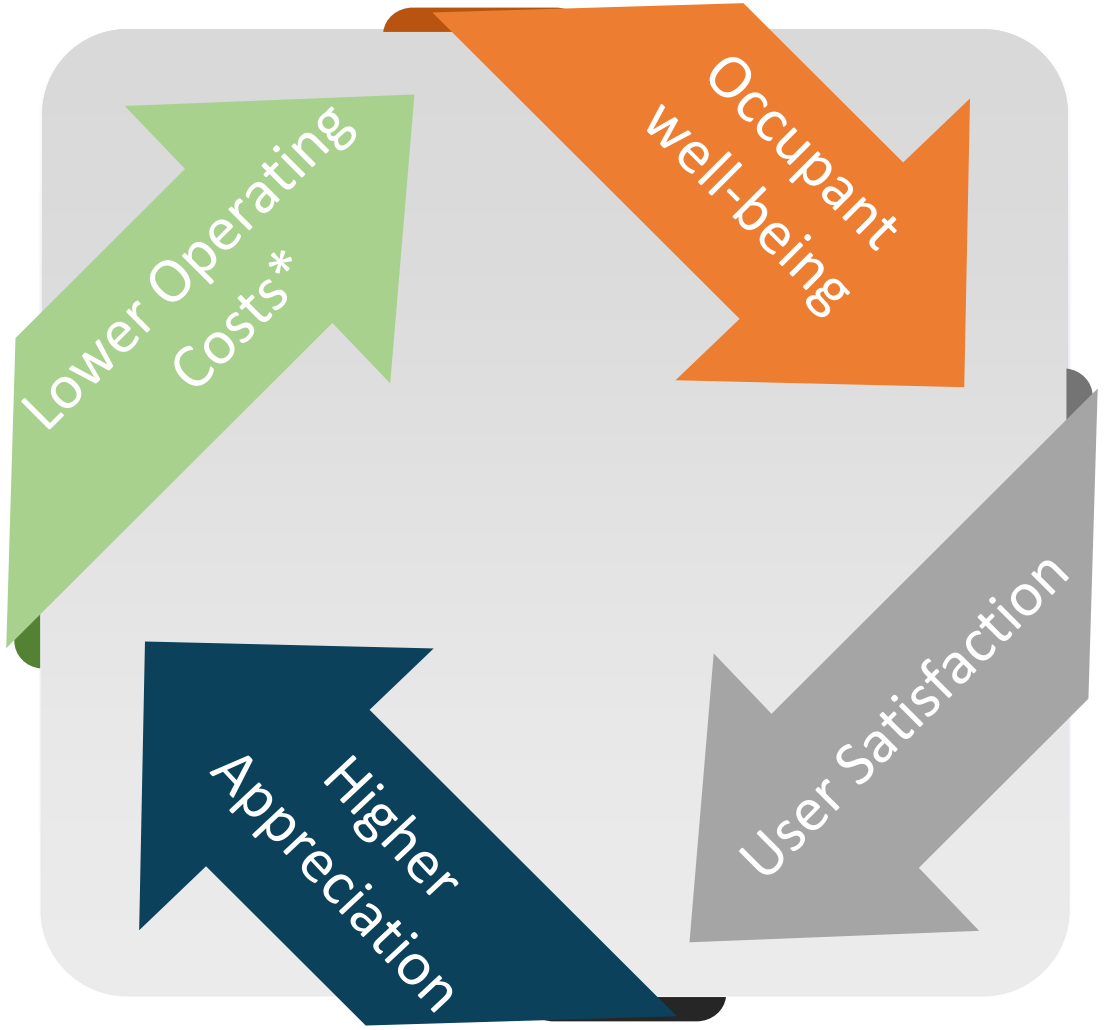
- Topsoil Preservation
- Design elements
  - Good Daylighting
  - Cross Ventilation
  - Tree cover
- Low VOC paints
- Water efficient fixtures
- Waste segregation and management

Measures - Marginal Investment

- High SRI Paint on Roof
- Rainwater Harvesting
- On-site Renewable energy
- Exhausts for Toilets & Kitchen
- Water metering
- Home Automation

Benefits


Eco-Friendly Homes
Recognition & Image
Market Transformation
Contribution to Society


Lower Operating Costs*
Occupant well-being
User Satisfaction
Higher Appreciation

Simple Documentation

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Attempted	Not Attempted	NEST PLUS Criteria	Applicability: New	Applicability: Existing	Mandatory /Credit	Requirements		Documents
Y		**Local Building Regulations**	✓	✓	M	Approved Plan from local municipal authority	☑	Approved Plans
Y		**Waste Segregation - Dry & Wet**	✓	✓	M	Provide 2 separate bins to collect dry waste (paper, plastic, metals, glass, etc.,) and wet waste (organic).	☑	Photographs of 2 separate bins
Y		**Rainwater Harvesting 500 Liters**	✓	✓	M	Rainwater harvesting system to capture at least 500 litres from the entire site area runoff. Or Project can have rainwater harvesting pit to capture run-off from roof.	☑	Photograph of rainwater harvesting pits
	4	**Passive Architecture**	**4**	**2**	C	Provide any two features mentioned below. For each feature two points (max 4 points): 1. Courtyard 2. Vernacular materials 3. Local Vernacular Elements 4. Any other passive cooling/Heating system 5. Skylights	☑	Concept description of features
							☑	Photographs of the passive architecture measure
1		**Top soil Preservation**	**1**	⊗	C	Preserve top 150-200 mm soil during excavation	☑	Photographs of top soil preservation
2		**Setbacks**	**2**	**2**	C	Provide minimum of 3 ft setback or as per local norms whichever is higher on 2 sides (1 point) More than 2 sides (2 points)	☑	Photographs of setback areas


THANK YOU
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