

GRIHA LD Version – 2015

Changes in the new version of GRIHA LD

Dear All

The following document highlights the various changes made to the GRIHA LD V 2015 – technical as well as those in process. These changes are applicable from 1st July 2015. For any queries on the following modifications, please email: info@grihaindia.org.

Change in Process: The rating of the final phase of the project will be given for the full project, based on the measures adopted during that phase as well as average rating achieved in all previous phases.

Technical Changes:

- **Rating Framework:**
 - In the GRIHA LD V2, rating was awarded based on “Reduction in Overall Impact”. It was often highlighted that this method has a slightly negative connotation to it and there is a steep learning curve to understand the framework. Therefore, in order to improve the communication framework of GRIHA LD rating, the overall rating framework has been modified.
 - As per the new framework, positive scores will refer to higher rating. The calculations of individual sections/sub-sections and overall core concept of the rating remain unchanged.
 - The Resource Impact section is renamed On-site Sufficiency section and Environmental Quality section is renamed Development Quality section.
- **Changes to Overall Rating points:**
 - No points will be awarded for any Mandatory Appraisals.
 - The overall weights associated with different sub-sections have been changed based on survey of several GRIHA experts. The table below highlights the new weights assigned to each individual Sub-section. The score achieved by the project teams in each individual Sub-section will be multiplied by its respective weight before being aggregated into the overall score for the rating.

Sub-sections	Overall Weights	Maximum Score	Score out of 100
Energy self-sufficiency	0.18	100	18
Water self-sufficiency	0.23	100	23
Organic solid waste treatment	0.12	100	12
Site Planning	0.08	100	8
Energy	0.09	100	9
Water	0.12	100	12
Solid Waste Management	0.06	100	6
Transport	0.06	100	6
Social	0.06	100	6
Total	1		100

- The overall rating thresholds have also been revised as given below:

Score	Rating
25 – 40	1 star
41 – 55	2 star
56 – 70	3 star
71 – 85	4 star
Above 85	5 star

- Technical Changes:

- **Mandatory Requirement (language revision from previous version):** The site plan must be in conformity with the development plan/master plan/UDPFI guidelines (mandatory). This should comply with the provisions of eco-sensitive zone regulations, coastal zone regulations, heritage areas (identified in the master plan or issued separately as specific guidelines), water body zones (in such zones, no construction is permitted in the water-spread and buffer belt of 30 meter minimum around the FTL), various hazard prone area regulations, and others if the site falls under any such area - **Mandatory**
- **Storm-water management (Site Planning – Development Quality):**
 - The revised appraisal clauses for **Storm water management** are:
 - Ensure that the storm water management plan on site is developed such that the post-development peak run-off rate and quantity from **2-year 24 hour design** does not exceed the pre-development peak run-off rate and quantity – **Mandatory**
 - Ensure that the storm water management plan on site is developed such that the post-development peak run-off rate and quantity from **5-year 24 hour design** does not exceed the pre-development peak run-off rate and quantity – **15 points**
 - Ensure incorporation of appropriate **SUDS** for managing **over 90% of the storm water quantity** on site – **15 points**
- **Tree Preservation on site (Site Planning – Development Quality):**
 - A new appraisal is added:
 - The total number of trees on site after construction should not be less than the total number that existed before construction – **Mandatory**
- **Passive Urban Design/Heat Island Calculator (Energy – Development Quality):**
 - The Heat Island Calculator has been shifted from the Site Planning to the **Passive urban design** in Energy – Development Quality. The calculator will be used to estimate the effect of proposed built environment on the outdoor temperature in key outdoor common areas which will be used by building occupants etc.
 - The revised appraisal clauses are:
 - Adopt passive design strategies and demonstrate that the outdoor temperature increment is at least **10/20/30%** below the GRIHA LD base case (averaged over at least 5 outdoor common areas) – **10/20/30 points**

- Street layouts and buildings have been designed to provide minimum obstruction to local wind flow - full 10 points if measure is implemented for the entire project - especially around the built mass – **10 points**
- **Metering and Sub-metering (Energy and Water – Development Quality):**
 - Two new appraisals are included as mandatory requirements; one in the Energy section and other in the Water section. These are listed below:
 - **Energy: Mandatory**
 - Meters on all sources of energy to the campus (local municipal grid, DG set, on-site renewable energy source)
 - Sub-meters for the following:
 - Individual metering for each building
 - Separate metering for outdoor lighting system
 - Separate metering for campus pumping station
 - **Water: Mandatory**
 - Meters on following sources of water:
 - Main municipal supply
 - Meter to measure treated water being used on site
 - Meter at outlet of rainwater storage reservoirs
 - Sub-metering on the following locations:
 - Water metering for each building separately
 - Metering to measure water being used in the irrigation system
- **Dedicated parking for disabled (Transport – Development Quality):**
 - A new appraisal is included:
 - Dedicated parking space for physically disabled people – as per the thresholds given below – 10 points

Total No. Car Parking Space in Lot	Required No. of Accessible Car parking Spaces
1-50	1
51-150	2
151-250	3
251-350	4
351-450	5
Above 450	6

Source: Handbook on Barrier Free and Accessibility, CPWD
<http://cpwd.gov.in/Publication/HandbookonBarrier.pdf>

- **Sustainable Building Materials (Solid Waste Management – Development Quality):**
 - New appraisal clauses are included in the Solid Waste Management Section:
 - Construction materials for use in site infrastructure:

- Use at least **5% recycled waste (as recommended by BIS/CRR)** in road construction (by total area covered) for at least **50/90 % of the roads** on site – **7/15 points**
- Use at least **5% recycled waste** in construction of pavements (by total area covered) for at least **50% of all the pavements** on site – **10 points**
- **All cement** to be used in the construction of building structures will be **PPC** (at least 15% mix – or on-site mix) – **10 points**