MINUTES OF THE 1st MEETING OF INSTITUTE GREEN COMMITTEE, IIT ROORKEE HELD ON 17.02.2014

The following were present in the Committee Room:

1.	Prof Pradipta Banerji, Director	Chairman
2.	Dr Arun Kumar, AHEC	Coordinator
3.	Prof Mahender Singh, Chairman E&W	Member
4.	Dr U.K. Sharma, Acting Institute Engineer	Member
5.	Dr Mahua Mukherjee, Institute Architect	Member
6.	Prof G.J. Chakarapani, Earth Sciences	Member
7.	Dr Avlokita Agarwal, Arch. & Planning	Member

The Chairman briefed the members about the decision of the institute that, henceforth all new building proposals shall be vetted by the Institute Green Committee before their final approval. The Green Committee must look into the various environmental and energy aspects for a green technology and environment.

The Campus Master Plan Committee had earlier approved for the construction of the following four new major buildings in its Roorkee campus.

- A Boys Hostel for 800 students with built up area of 21,000 m^2
- A Married Students Accommodation with built up area of 11,400 m^2 and a transit accommodation for Faculty with built up area of 6,840 m^2
- A Lecture Hall Complex with built up area of 11,600 m^2
- A Students' Activity Centre with built up area of 4,900 m^2

With the above background information, the Committee deliberated on the issues and decided that all new buildings shall have the required consideration at the stage of site selection, design, construction and monitoring as follows:

1.1 **Site Selection**: site selection shall be based on its present land use, topography, communication, forest area etc.

1.2 **Design stage** : While designing the buildings, the planned structure must emphasize on use of following:

- Maximum natural sun-light and open air ventilation
- All required features for sustainability
- Natural and forced ventilation to be compulsorily integrated into design to reduce HVAC usage
- Passive features to be incorporated
- Energy efficient systems and Energy conservation as per standard practice for achieving minimum energy consumption
- Design to be climatically responsive
- Grey Water Efficiency through specifications to be ensured for e.g. Low Pipe plumbing, low flow fixtures
- Water recycling and reuse
- Materials selection - low VOC paints and finishes, Low embodied energy, Local materials to be preferred, Low maintenance requiring materials to be chosen

- Low E-glazing tiles and glasses
- Noise barrier – Green buffers to avoid noise pollution
- Onsite energy generation- active energy sources for example solar
- Rain water harvesting to be mandatory
- Evacuation planning- safety in case of emergency/disaster
- All facilities viz internet, security, telephone, fire safety to be integrated at initial stage
- Universal access
- BIM modeling
- Underground re-charging of water

1.3 At site selection stage:

Site be chosen such that there is minimum interventions/disturbance as per institute master plan

1.4 **At Construction stage**:

- Entire work area to be covered during construction stage.
- Dust cover during construction
- Debris removal during demolition to be standardized, construction waste management practices should be followed.
- Reuse of salvaged material after demolition
- local materials to be preferred
- Land scaping plan of each project
- Noise reduction measures to be followed.
- Construction phasing and sequence based upon BIM Model
- No wastage of construction material
- Minimum site disturbance
- Safety of workers
- convenience - accommodation and toilets, safety and security for workers
- Environmental clearance (>20000 sq m built up) before construction
- Approval by committee on green

1.5 Monitoring:

- Monitoring be done for all above attributes regularly at all stages.
- Students be involved for monitoring and reporting

1.6 Sustainability

- Environmental audit
- Space audit

1.7 Benchmark for resources like energy, water, etc with available standard wise be prepared

The meeting ended with vote of thanks to and from the Chair.