Site Management Best Practices for GRIHA Compliance
Implementation Experiences

Mr. Subrato dey
SABIC Research & Technology Pvt. Ltd., Bangalore
Site Management Best Practices for GRIHA Compliance

Implementation Experiences

SABIC Research & Technology Pvt. Ltd.
Bangalore, India
PROJECT INFORMATION
## Project Information

<table>
<thead>
<tr>
<th>Project Info</th>
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<tbody>
<tr>
<td><strong>Project Title</strong></td>
<td>SABIC Research &amp; Technology Pvt. Ltd.</td>
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<tr>
<td><strong>Building Use</strong></td>
<td>R &amp; D Campus (Office + Labs)</td>
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<tr>
<td><strong>Location</strong></td>
<td>Sarjapura; Bangalore</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>2,25,390 Sq. Ft</td>
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<tr>
<td><strong>Site Area</strong></td>
<td>46.22 Acres</td>
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<tr>
<td><strong>Certification Level</strong></td>
<td>LEED NC Gold (under Review) &amp; GRIHA 3 Star (under Review)</td>
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<tr>
<th>Project Team Profile</th>
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<tbody>
<tr>
<td><strong>Owner</strong></td>
<td>Saudi Basic Industries Corporation</td>
</tr>
<tr>
<td><strong>Architect</strong></td>
<td>Venkatramanan &amp; Associates</td>
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<tr>
<td><strong>LEED Facilitator</strong></td>
<td>Eco 3 Design Consultants Pvt. Ltd.</td>
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PROJECT INFORMATION

Buildings B1, B3 and B5 going for LEED & GRIHA Certification
Project evaluation was done at initial stages and based on preliminary review, project is expected to target **72 points** and hence **3 STAR rating under GRIHA rating system**.

It is aimed to increase the benchmark and target for the **4 STAR rating under GRIHA rating system**.

[01-Annexure- Evaluation checklist - SABIC_080411.pdf](#)
SABIC | GRIHA | CONSTRUCTION STATUS AS OF NOVEMBER 2012

PRESENT STATUS AT SITE

B1 BLOCK

B3 BLOCK

B5 BLOCK
Association for Development and Research of Sustainable Habitats

is pleased to acknowledge

Exemplary Demonstration of Site Management practices

at the

SABIC Research & Technology Pvt. Ltd. Campus, Bengaluru*

National Conference on Green Design

1 - 2 March 2012
Manekshaw Centre, Delhi Cantt.
New Delhi

*registered for GRIHA rating

Dr R.K. Pachauri
President

Association for Development and Research of Sustainable Habitats

Award for Exemplary Demonstration of Site Management Practices
SITE SELECTION & PLANNING

Cr 2  Preserve & Protect Landscape during Construction/ Compensatory Depository Forestation
Cr 3  Soil Conservation (post construction)
Cr 5  Reduce hard paving on site
Cr 6  Enhance Outdoor Lighting System Efficiency
Cr 8  Provide at least Minimum Level of Sanitation/ Safety Facilities for Construction Workers
Cr 9  Reduce Air Pollution During Construction

BUILDING PLANNING & CONSTRUCTION STAGE

Cr 12  Efficient Water Use During Construction
Cr 21  Water recycle and reuse (including rain water recharge pits)

BUILDING PLANNING & CONSTRUCTION STAGE

Cr 22  Reduction in Waste During Construction
Cr 23  Efficient Waste Segregation
Cr 24  Storage & Disposal of Waste

CONSERVATION & EFFICIENT UTILIZATION OF RESOURCES

WATER

WASTE MANAGEMENT

SITE PLANNING & MANAGEMENT
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Implementation of Site Logistics Plan
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Implementation of Site Logistics Plan

Emergency Evacuation Plan & Site Logistics Plan Displayed at Site Entry
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Implementation of Site Logistics Plan- Material Store Yards

Proper Storage of Cement Bags & Scaffolding Materials
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Staging & spill prevention measures

Erosion & sedimentation measures

Seeding of Embankments along Roads
C-02  Preserve and protect landscape during construction/compensatory depository forestation.

Erosion & sedimentation measures
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Protection of Existing Landscape
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Tree Transplantation Process
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Tree Transplantation – Present Status

Transplanted Trees
C-02 Preserve and protect landscape during construction/compensatory depository forestation.

Development of Onsite Nursery & Onsite Vermicomposting Facility
C-02  Preserve and protect landscape during construction/compensatory depository forestation.

Development of Onsite Nursery – Present Situation
C- 03  Soil conservation (During Construction)

Top Soil Preservation
C- 03 Soil conservation

Top soil Management- Present Status – Top Soil Reuse

Preserved Top Soil being Reused for the Nursery and Landscape Works
WATER, WASTE-WATER AND SOLID-WASTE MANAGEMENT
C-12 Efficient water use during construction

Use of Gunny Bags and Treated Grey Water for Curing Purpose
C-20 Waste water treatment

Waste Water Treatment During Construction & Reuse of treated waste Water & Rainwater

Onsite STP During Construction provides treated grey water for nursery and landscape purpose
SABIC | GRIHA | SITE IMPLEMENTATION for GRIHA COMPLIANCE

C-20 Waste water treatment

RO Reject Water Used for Curing, Compactions & Block Making Process
C-20 Waste water treatment

Waste Water Treatment During Construction & Reuse of treated waste Water & Rainwater

Treated water available from onsite STP and STP at Labour Colony being used for landscape purpose
Rainwater Recharge and Percolation Pits
C-22 Reduction in waste during construction

Construction Waste Yard & Recycling of Construction Waste
C-22 Reduction in waste during construction

Construction Waste Yard & Recycling of Construction Waste
Indoor Air Quality Management During Construction

Covering the loose ends of the ductwork presently ongoing
Indoor Air Quality Management During Construction

Protection of MEP Equipments, Materials etc. Being procured at site
Indoor Air Quality Management During Construction

Protection of MEP Equipments, Materials etc. Being procured at site
HEALTH, WELL BEING & ENVIRONMENTAL QUALITY

02- Annexure- SRTPL Site Progress- Annexure- Staff & Labour Welfare Implementation.pdf
AIR POLLUTION CONTROL MEASURES

03- Annexure- SRTPL Site Progress- Annexure- Air Pollution Control Measures.pdf
Processes Set Up at Site To Address Ground Realities for GRIHA Implementation

**Onsite Reality 01**

- People working at site level not aware of the GRIHA initiatives to be implemented
- Ignorance on requirement of documenting the construction progress and GRIHA site implementation strategies.

**Process Set up to Address**

Capability building at site level to create awareness about green building efforts being carried out and to explain the requirement of documenting the construction progress and GRIHA site implementation strategies on regular basis.

04- Annexure- Green Education\WED CELEBRATIONS SABIC SITE.pdf

05- Annexure- Green Education\One Million Safe Man Hours Celebration Function.pdf
Processes Set Up at Site To Address Ground Realities for GRIHA Implementation

Onsite Reality 02

• Keeping track of documentation at regular frequency to prevent any loss of site data required for GRIHA submission is not addressed effectively

Process Set up to Address

Fortnightly Project Tracking Meetings to keep track of documentation at regular frequency to prevent any loss of site data required for GRIHA submission

Every Fortnight meeting between client, green building consultant and site contractors to evaluate present status & deliverables.
Processes Set Up at Site To Address Ground Realities for GRIHA Implementation

**Onsite Reality 03**

- Regular Site inspection by GRIHA facilitation consultant and ADaRSH Team is critical for maintaining check on the initiatives implemented.

**Process Set up to Address**

- **Monthly Progress Reports** shared with ADaRSH team of GRIHA for maintaining easy flow of information transfer to the GRIHA team

**06- Annexure- Monthly Progress Report being shared with ADaRSH team on Regular Basis**
THANK YOU