Can Green Sell Better, Faster?

DACHA HOMES
CELEBRATING SUSTAINABILITY

Tom Sawyer’s Trick

“SAY, TOM, LET ME WHITENASH A LITTLE.”
Schindler did not “Shrug” while Atlas... can...😊

100 % water secure - No water tankers
Catching every drop that falls on land

WATER CYCLE FOR DACHA COMMUNITY

8.6 million litres rain water percolated

Annual Total Water requirement 68,28,000 litres
Harvestable Annual Water-86,00,000 Litres

We are water sufficient!
Dual plumbing lines to recycle treated water

No Fat energy bills

ENERGY BILL SLASHED

| Connected Load - Super Luxury Dacha | 4.4 | 1.5 | 3.5 | 0   |
| Connected Load - Luxury Dacha      | 3   | 1.5 | 0   | 0   |
| Connected Load - Conventional Villa| 8   | 5.5 | 5   | 3   |
60% less energy capital cost

Total Connected Load to the transformer is 250 kVA as against 700 kVA in conventional designs
- 32 Nos. of Luxury Dacha Homes - 5 kW each
- 5 Nos. of Super Luxury Dacha Homes - 7 kW each
- Clubhouse - 9 kW
- Other Amenities - 40 kW

Solar Power making lighting and water heating off-grid

2 kW Solar Panels for Super Luxury Dacha Homes
1 kW Solar Panels for Luxury Dacha Homes

Hot water generated from Solar water heaters of 200lt capacity mounted on the individual Dacha roof top

NO DARK EVENINGS OR COLD BATHS
Innovative automation systems that reduce energy usage

Good Morning Home!

Feel Green Mode  Kids safe Mode  Off to office Mode

Swimming pool heated by ambient air
LED lighting throughout

Day lit...colourfully...
Naturally cool, bioclimatic design

DAYLIGHT & FENESTRATION DESIGN ANALYSIS
Daylight penetration into the interior spaces - Dacha Type 2

5 Amps air conditioning only for bedrooms
Hoodwinking with materials

Italian Marble
Lower embodied energy

Hard Wood Floor
Lower embodied energy, use of sustainably renewed resource
Tom Sawyer’s Methodology

**GREEN FACTOR**

- **Polished Granite for Decks**
- **Wood composite**
  - Recycled material lower carbon footprint

- **Paints**
- **Low VOC Paint**
  - Less toxic

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**Structures looking nicer using lesser concrete**

**GREEN FACTOR**

- **Concrete Vault**
- **Catenary Vault using SSBS**
  - Lower carbon footprint

- **Concrete Column**
- **Grouted Columns**
  - Lower Carbon Footprint
Structures looking nicer using lesser concrete

**GREEN FACTOR**

RCC → FILLER SLAB

Bricks → Engineered Hollow concrete blocks

**COST ANALYSIS - CONSTRUCTION**

<table>
<thead>
<tr>
<th>CONVENTIONAL CONSTRUCTION</th>
<th>DACHA CONSTRUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRAMED STRUCTURE</strong></td>
<td>LOAD BEARING STRUCTURE</td>
</tr>
<tr>
<td>Concrete = 9800 cuft</td>
<td>Load bearing walls with grouted columns and beams = 6100 cuft (Concrete)</td>
</tr>
<tr>
<td><strong>BRICK MASONRY</strong></td>
<td>HOLLOW CONCRETE BLOCK MASONRY</td>
</tr>
<tr>
<td>No. bricks per sqmnt - 60 nos.</td>
<td>No. of blocks per sqmnt - 15 nos.</td>
</tr>
<tr>
<td>U-value = 1.42 w/m²K</td>
<td>U-value = 1.9 w/m²K</td>
</tr>
<tr>
<td><strong>RCC SLAB</strong></td>
<td>FILLER SLAB</td>
</tr>
<tr>
<td>Concrete quantity for all slabs = 2273cuft</td>
<td>Concrete quantity for all slabs = 1600 cuft</td>
</tr>
<tr>
<td>Total steel Quantity = 4.5 kg/sqft</td>
<td>Total Steel quantity = 2.5Kg/sqft</td>
</tr>
<tr>
<td><strong>RCC COLUMNS</strong></td>
<td>GROUTED MASONRY COLUMNS</td>
</tr>
<tr>
<td>Concrete quantity for all columns = 476 cuft</td>
<td>Concrete quantity for all grouted columns = 130.6 cuft</td>
</tr>
<tr>
<td><strong>RCC VAULTS</strong></td>
<td>CSEB MASONRY VAULTS</td>
</tr>
<tr>
<td>Concrete quantity for all vaults = 1083 cuft</td>
<td>Concrete quantity for all vaults = NIL</td>
</tr>
<tr>
<td>Steel quantity = 3 kg/sqft</td>
<td>Steel quantity = NIL</td>
</tr>
<tr>
<td></td>
<td>Compressed stabilised earth blocks = 1083 cuft</td>
</tr>
</tbody>
</table>

**SAVINGS**

A DACHA COSTS 30% LESSER THAN A CONVENTIONAL BUILDING STRUCTURE OF SIMILAR SIZE AND AREA.
### COST ANALYSIS - ENERGY

<table>
<thead>
<tr>
<th>Conventional Electrical Services</th>
<th>Dacha Electrical Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Production</strong></td>
<td></td>
</tr>
<tr>
<td>No provision for generating</td>
<td>2KW of energy is generated</td>
</tr>
<tr>
<td>On-Site Energy</td>
<td>on-site per villa using Solar Panels installed on roof tops.</td>
</tr>
<tr>
<td><strong>Energy Consumption</strong></td>
<td></td>
</tr>
<tr>
<td>Total Sanction load for each villa - 12 to 15 kW</td>
<td>Total Sanction loads - Super Luxury Home - 7KW Luxury Dacha Home - 5 kW</td>
</tr>
<tr>
<td><strong>Energy Distribution</strong></td>
<td></td>
</tr>
<tr>
<td>4 sqmm cross sections used for Main Power Supply and Internal wiring for Homes</td>
<td>2.5 sqmm cross sections used for Main Power Supply 1 sqmm cross sections used for internal wiring</td>
</tr>
</tbody>
</table>

**Savings**

- 15%
- 10%

### COST ANALYSIS - WATER

<table>
<thead>
<tr>
<th>Conventional Plumbing &amp; Services</th>
<th>Dacha Plumbing &amp; Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Harvesting</strong></td>
<td></td>
</tr>
<tr>
<td>Minimum to no rain water harvesting</td>
<td>Annual Rain Water Harvested 86,300,000 Litres</td>
</tr>
<tr>
<td>Annual Water Requirement - 68,80,000 Litres</td>
<td>Harvested Rain Water to be stored in well and diverted for groundwater percolation.</td>
</tr>
<tr>
<td><strong>Water Consumption</strong></td>
<td></td>
</tr>
<tr>
<td>Total water consumption per villa unit - 1200-1500 litres/day from municipality</td>
<td>Total water consumption per villa unit - 610 litres/day from site eventually Dual Plumbing system to recycle Grey water for flushing and landscape proposed Low Flow Fixtures Use of 2/4 litres cisterns for fixtures Use of aerators and flow restrictors</td>
</tr>
<tr>
<td>Assuming 225 l/person/day for luxury homes</td>
<td>17%</td>
</tr>
<tr>
<td>Dual Plumbing system not present</td>
<td><strong>Water Treatment and Discharge</strong></td>
</tr>
<tr>
<td>High Flow Fixtures</td>
<td>Centralised Sewage Treatment Plan proposed to treat and recycle grey water for re-use in site.</td>
</tr>
<tr>
<td>Use of 4/8 litres cisterns for fixtures</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Savings**

- 100%

**A Dacha conserves and recharges more water than it consumes and is water independent.**
Experiential spaces and not just rooms

Personas related to spaces
Over a 100 such experiences

Spread over different levels
Little nooks and corners that tug at hearts

Comparisons that impact
Showing the difference

A site with over 230 grown trees
Food forests using zero budget farming methods

Herbal gardens for primary health care at home
10000 kg of veggies and 5000 kg of fruits from campus

POSRAK VANA - FOOD FOREST
Food forests are laid out with native heirloom varieties of trees, herbs, shrubs, and climbers that provide a wide range of fruits, vegetables and millets.

100% native and medicinal plants for landscape

KUSHAL VANA - FAMILY GARDENS
Plants with intriguing features and those of cultural relevance, aimed at stimulating minds and words alike in people of all age groups.

KALYANA VANA - ENTERTAINMENT GARDEN
Plants with bright-coloured blooms that instil a mood of celebration. These include shrubs and herbs that create beautiful backdrops and focal points that grab attention.
No chemicals needed for maintenance

What do you pay for?
Passion Sells

Appeal to Fear Sells
Solutions to Problems Sell

So why can’t green sell faster or better?

Passion + Appeal To Fear + Solution to Problem = GREEN
Dacha Homes
Launch Price = 30% more than competition

Thank You

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