Hillside C-type Renovation
Issues and Remedies
(Unconfirmed Minutes)

Presented by Residents
to Deputy Director, IIT Bombay
2007/10/16
Hillside C-type event timeline

- Late May/early June: ‘repairs’ commence
  - Zero prior consultation with residents
  - Noise, rock dust, robbery, electric bill, lift, …
- By 7th June, Dean P alerted to problems
- Within days, **severe seepage** all over, even in places that were earlier doing fine
- 22nd Aug Dean P visit after weeks of trying
- Given detailed diagrams showing leakage
- 28th Aug Mandrekar visit and demo
- No action to date, except…
DeanP says after all this effort:

- Location and design aspects of Window, Window grill, and the Window sill. Both Prof. Hazra and Mr. Mandrekar strongly felt that there are no design faults. **Hence** no change is required.

- The patches which have appeared in newly renovated & painted apartments will be set right by the contractor within next few days after the surfaces dry up.

- All seepages which have occurred in the outer walls will have to be rectified by external repairs for which **Mr. Mandrekar had already brought one expert** on October 1st to look at the problem.
Note: This is not the topmost floor

Kitchen ceiling in July-Aug
Note: This is not the topmost floor

Bedroom loft and wall

You don't want to look here

New seepage boundary

Patch repair
Living room loft torrents

- Plaster crumbled
- Rivulets after 1—2 hours of rain
- Loft filled up with liters of water
- Rotted property
- Overflowed below
- Narrowly missed laptop below
- Window sill one floor up vertically above
To Deputy Director IIT Bombay

Original design of Hillside C-type window rail rainwater drainage mechanism with minor enhancements

- Drill drain holes here throughout length
- Caulk with silicone sealant
- Drain channel
- Outer Alu frame
- One single stone slab
- Exterior wall bricks concrete and masonry

Tiles

Inside

Outside

Drill drain holes here throughout length
Current status of most window rails in Hillside C-type building showing how drainage is impaired and seepage occurs.

This cement ramp is a disaster and must be removed completely.

Stone slab does not cover sill width.

Severe seepage here...

Exterior wall bricks concrete and masonry.

...and downstairs (loft).

This surface must be made waterproof.

To Deputy Director IIT Bombay
What we requested

• Windows must be redone with single stone base and properly drained gutters
  – No alternative or compromise
• Tile all lofts and closets (over and above waterproofing chemical)
• Make sure window and balcony slopes are enough and correct
• Over and above, arrange for top-grade terrace and external waterproofing, especially utility shafts
Cosmetics over function

- No material will resist water if you let water accumulate or seep in
- Not rocket science!
- Money that should have been used on windows and terrace blown on
  - Ripping up, replacing perfectly fine floor tiles with new Marbonite
  - Concealing pipes
“No design faults”, indeed?

• Then why were lateral holes hastily drilled after our first tour and demo?
• Not nearly enough drainage
• Has probably damaged runner rails
• Gap between rail and cement remains!
"External waterproofing soon"

- External waterproofing needed **before** internal cosmetics
- Even perfect external repairs will not fix the window leakage issues
- Just look at the rest of IIT for precedents
- Competent engineers always build multiple layers of protection

Even before DeanP responded, we showed him the above slide!
External waterproofing, IIT style

- When kitchen remodeled, wall broken around pipe to kitchen utility shaft
- Not sealed back promptly
- Exposed to heavy rains for two months
- Can clearly see moss around aperture
- Prevention vs. cure
On concealed plumbing

- KReSIT urinal originally with concealed pipe
- Got clogged
- No skill or will to restore to pristine
- Add external PVC pipe, abandon hole
- Ugly + smell + roach
- A culture of decay
Culture of buying, not maintaining

- From dispenser to coke bottle in two months
- Dispenser dispenser got rich, IIT got poorer
- C-type bath light from Dadar, none in Powai/HN
Loft shutters: The good

- Waterproof bakelite sheets: seepage no problem
- Sliding shutters: no knocking into fan if open
- Large segments allow big suitcases and long items to be stowed
Loft shutters: The bad

- Laminated plywood will rot in case of seepage
- Hinged panel knocks into lamp sockets and fans
- Had to change concealed wiring to external
- Tiny segments: large Samsonite does not pass
Kitchen counter: Intuitive

- 4 feet of counter space between oven and sink
- Dishwashing does not splash water over oven
Kitchen: counter-intuitive

- Now the cylinder can only be placed next to sink
- Counter space to left of oven; sink water splash
- Proposed “fix”: dangerous six-foot LPG pipe
DeanP response

• Location of Gas Cylinder in kitchen. Both Prof. Hazra and Mr. Mandrekar mentioned that it is a matter of personal opinion.

• It is not proper to make any changes in the apartments already renovated.

• However, for further renovation, the occupant can give his/her choice and the modification can be done accordingly.
Comments from Discuss Faculty

• Many of us found that the remodeled 20 quarters were not in good condition because of fungus that was formed in almost all quarters after painting. Seepages are also seen.

• I do not understand why repairs and remodeling was taken up, as there were possibly no major faults. Residents are the best to comment on that.
Comments from Discuss Faculty

• This culture where 'projects' are fabricated out of nothing is spreading on the campus and should concern all of us. These are possibly indications that we are finally becoming a part of the society and are not outliers when it comes to that *****ption word.

• I am more worried about the fungus. It is bad for all, but more so for kids and the elderly. It is criminal to hand over possession in this condition.
Comments from Discuss Faculty

• The worst is that these people had the building for a year. They now allot the residents the building saying that they should move in and then it will be painted after they have moved in.

• **It took the Institute 1 year to do shoddy repairs.** Now they further want to trouble the residents by painting when they move in.

• **WILL SOMEBODY PLEASE ANSWER WHY?** (Emphasis in original writing)
Comments from Discuss Faculty

- Same about the road, same about the drainage system, same about so many houses and academic area having been subjected to water proofing (and they leak like nobody's business), same about Ananta, same about so many empty garages having been built.

- This simply cannot be a coincidence. This cannot be just neglect or apathy. A few thousands they cannot sanction but they can allow crores to be pilfered.
Other faculty communication

• Many in administration treat faculty like dirt. They do not acknowledge that you even exist.

• There are things that is in their control – like showing basic minimum decency to faculty members. At least treat us like 2nd class citizens and not like slaves.
Solutions?

One commonly hears that carping critics complain about what is wrong, but do not present solutions. There is an accurate translation for that charge: "They present solutions, but I don’t like them."

---Noam Chomsky
Decentralize and empower

• Before work of such magnitude, residents must be consulted in a town hall meeting
• Residents are stakeholders: they must be given sign-off authority before payment is cleared
• Per-building approximation of coop housing society
  – Pilot study in hillside C-type
Facility Development Fund

• Like RDF with 0% deductible because faculty is developing IIT facilities
• Faculty or staff approaches Dean P or coop committee with a proposal and quotations
• Usually, no structural changes
• Must be consistent with other flats
• Faculty can hire external contractor
Estate Office

• Many people find it difficult to interact with and chase Estate Office to get work done
• Need liaison between “customers” (faculty, staff, students) and Estate Office personnel
  – Understand problem being reported
  – Coordinate Estate Office people
  – Supervise quality of work done
• Evolutionary coexistence between Estate Office and external contractors
Complaint Tracking System

- Web-based, say (low-tech adequate)
- Residents log on and file complaints
- Can only be signed off by resident
- Regular review of throughput and latency
- Good to leave audit trail in case of later disputes