Swastik

"Currently home to an N.R.I. Family, the bungalow has many unused rooms. Also, the needs of the family are modern, which demand certain modifications in the building. Keeping this in mind, the new design proposes a house with modern facilities for the family and a small Girls' Hostel.

"Tradition is that facet of life which can be suitably interpreted through the ages without losing its character...

...A building that can adapt to the changing needs of time is the true heritage which stands the test of time."

An Abode
A Residence
An Institution
A Hostel
A Home away from Home

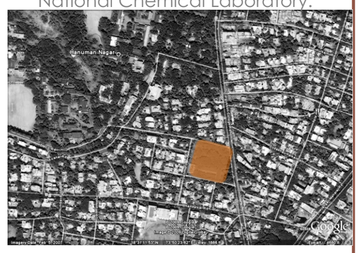
Pune has more than a hundred educational institutes and nine universities, and has acquired a reputation as 'The Oxford of the East', with students from all over the world studying at the colleges of the University of Pune. Pune has more schools, colleges, educational institutions and universities than any other city in the world.

Hence, a Girls' hostel for girls coming from interiors of the country to study here is the perfect elucidation for the bungalow. The Hostel has can accommodate 24 girls and has modern hostel facilities like a study, computer centre, badminton court,etc. Thus, this building is like a home for these girls who are staying away from their home.

Fergusson College.

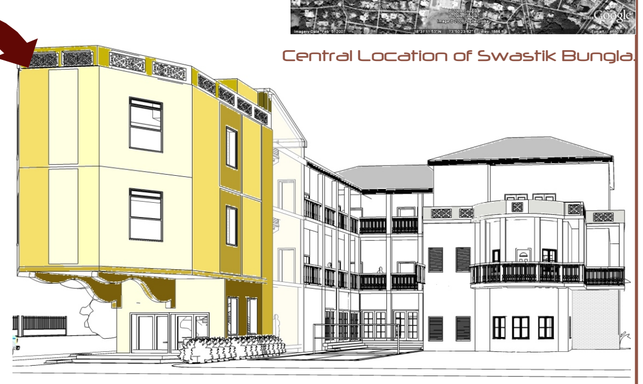
Pune University.

National Chemical Laboratory.

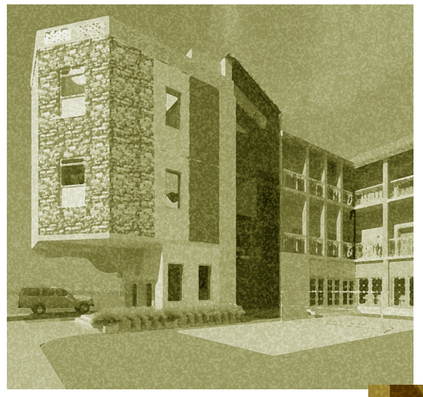


Central Location of Swastik Bungla.

The Garage in the West Wing.



The addition of Hostel Wing.



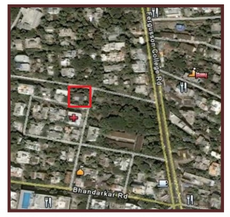
STUDY
OFFICE
GYM
COMP LAB

THE TRANSFORMATION

WADA

HOME

HOSTEL



LOCATION

Metamorphosis of a WADA

Swastik

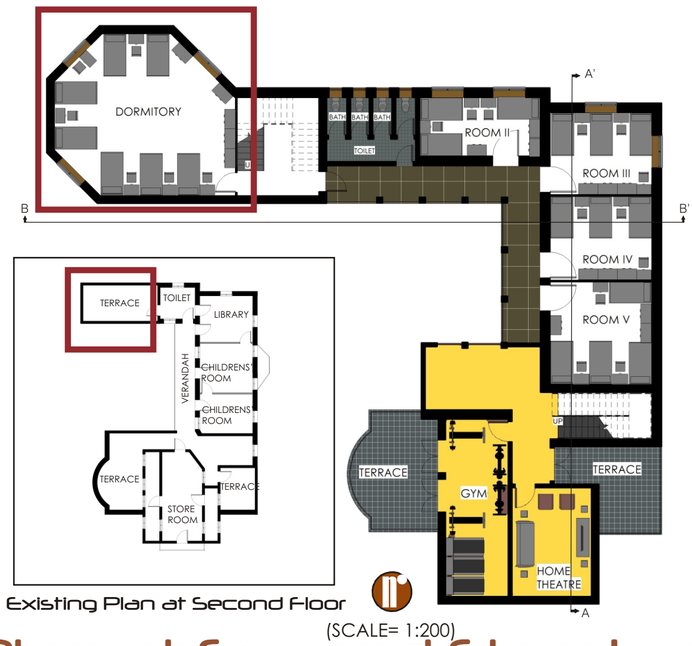
The design effectively differentiates the hostel from the house. The house occupies the entire Ground Floor and the Eastern wing with the main staircase. The Munim's room is now the Owner's office, and the store rooms have been converted into an indoor Gym and Home Theatre.

The garage has been converted into an entrance for the Hostel and a staircase leads upto the rooms. The above two floors are cantilevered and comprise of the dormitories, common room, dining room, etc.

Existing plan at First Floor.

(SCALE= 1:200)

Plan at First Floor Level



Existing Plan at Second Floor

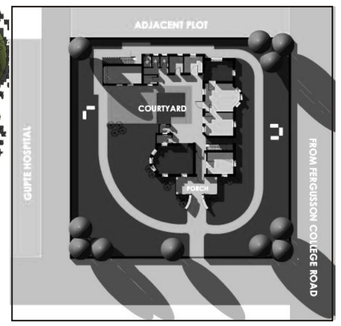
(SCALE= 1:200)

Plan at Second Floor Level

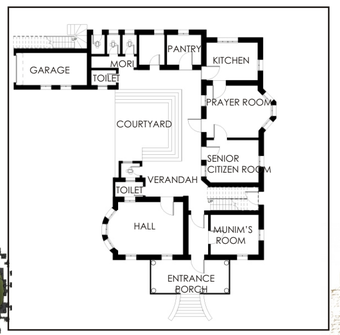
View of Gym.

Home Office.

THE NEW LAYOUT



Existing Site Plan



Existing Plan at Ground Floor.

Ground Floor Layout

(SCALE= 1:200)

The Layout has been modified such that the privacy of the resident family is intact. Two main entrances have been provided for the family and a side entrance for the hostel. The open Central Courtyard has been given sliding, folding doors for making the house secure. A Badminton Court has been provided in the front open space. thus, the erstwhile recreational space of the ladies and children of the house is still intact in its function!

Hostel Dormitory.

Common Room.

Hostel Reception.

Metamorphosis of a WADA

Swastik

Conserving nature...

A] BASIC REQUIREMENTS:

a) Area of the plot: 35m x 35m = 1225 sq.m
b) Total area of roof top= 458 sq.m.
c) Total paved area= 208 sq.m.
d) Total landscaped area= 311 sq.m.
e) Total number of users= 25 (hostel students)+ 5 (family)+ 5(staff)

B] WATER REQD. FOR 35 PEOPLE= (135 litres per person/ day)

a) For a day= 4725 litres.
b) For 365 days = 17,24,625 litres.

C] RAINWATER HARVESTING POTENTIAL FOR THE PLOT:

RAINWATER HARVESTING = CATCHMENT X RUNOFF X AV. ANN
POTENTIAL AREA COEFF. RAINFALL

1. Potential for rooftops: 264.54 cu.m.
2. Potential for paved areas: 75.088 cu.m.
3. Potential for landscape area: 67.36 cu.m.

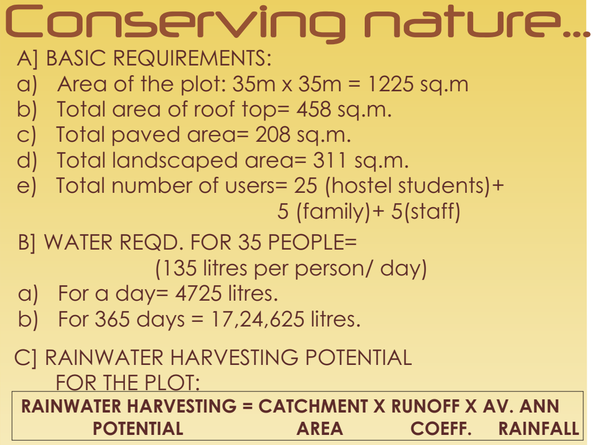
TOTAL RAINWATER HARVESTING POTENTIAL: **4,06,988 litres**.

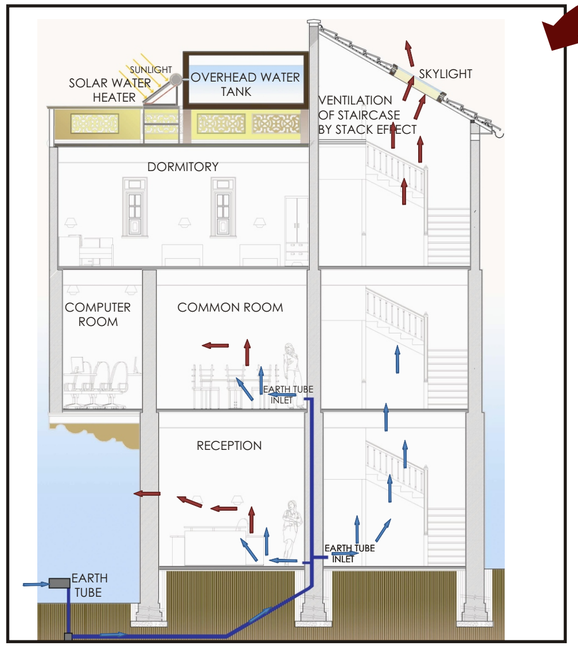
D] DESIGN FEATURES:

1. Grooves in terrace slab edges for roof-top catchment and recharge trenches for paved areas to recharge groundwater.
2. Bore well has been provided to harness this ground water.
3. Water from borewell is pumped into a common underground tank from where water is pumped to the overhead tank.

RAINWATER HARVESTING

(Reference: www.rainwaterharvesting.org)



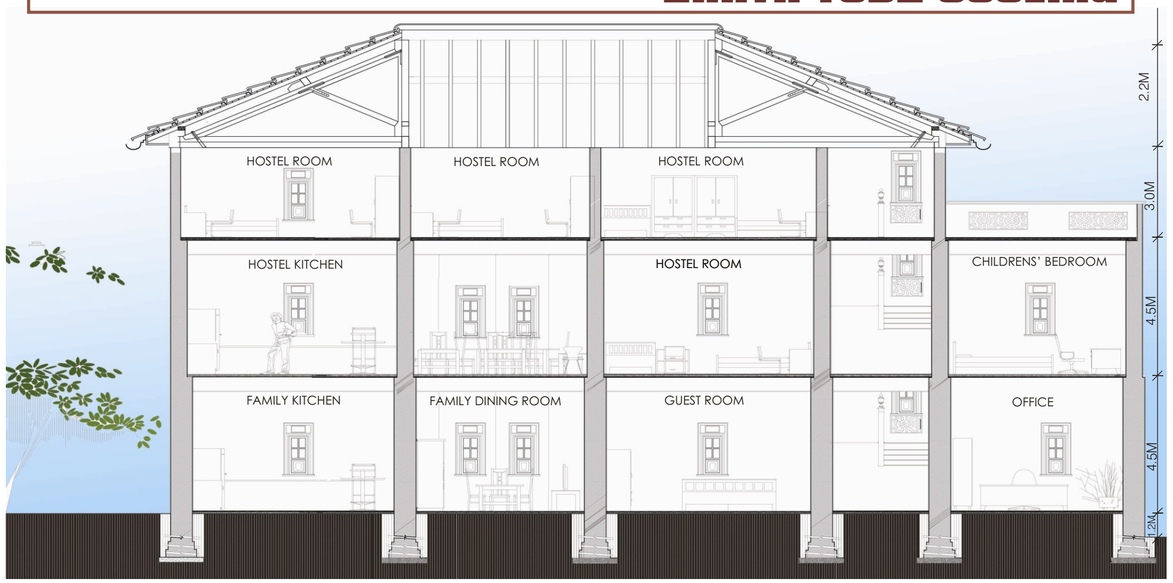


Section BB' (SCALE= 1:200)

Keeping it cool...

Tubes carrying outside cool air go upto a certain depth into the ground . This further cooled air due to the low temperature of the earth is then taken to the inside of the house with the help of vents in walls. This lowers the internal temperature and the warm air rises and is taken out of the structure by the help of windows. The diameter of the pipe is generally 1 to 1.5 feet and can be taken underground to any desirable depth, depending upon the cooling required.
This is a natural method of interior cooling which maintains a cool atmosphere and reduces the needs of artificial conditioning of air.

EARTH TUBE COOLING



Section AA' (SCALE= 1:200)

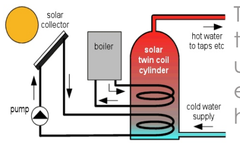
Energy Savings...

(Reference: www.googlesearch.com-energy calculator)

ROOMS	NO. OF CFL'S
1. Drawing room	5
2. Bedrooms(3)+ Guest	10
3. Hostel rooms (5)	15
4. Kitchen(2) + Dining(2)	8
5. Common room	6
6.Computer+Study+Entertainment room	8
7. Gymnasium	3
8. Office	2
9.Servantsroom+Store+ laundry	6
10. Toilets	12
11. Reception	4
TOTAL	**79**

	WATTS PER ITEM	UNIT/ MONTH
TUBELIGHTS	40 WATT	576
LAMPS	100 WATT	1368
	TOTAL	1944

The use of **CFL'S** reduces 25% of the unit consumption of energy thus saving a lot of energy.
THE PASSIVE DESIGN FEATURES DISCOURAGE THE USE OF AIR CONDITIONERS

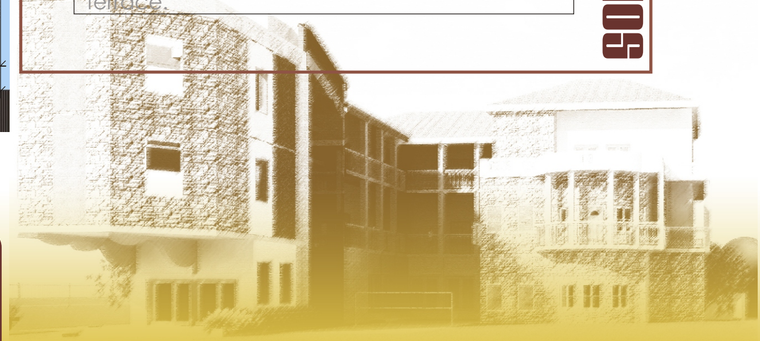


The use of **SOLAR WATER HEATER** to heat water instead of the use of GEYSERS saves a lot of energy which the house would have otherwise consumed.

6 GEYSERS-2hrs/day EACH= 540 units/month. Which is a lot of energy which is thus **saved** by the used of the solar panels installed on the terrace.

SOLAR WATER HEATING

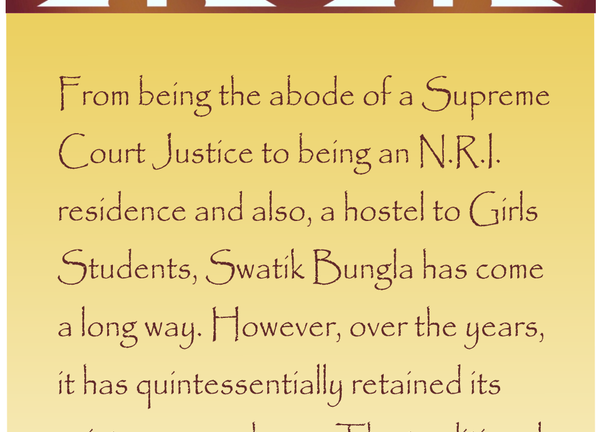
A SUSTAINABLE SOLUTION



Metamorphosis of a WADA

Swastik

From being the abode of a Supreme Court Justice to being an N.R.I. residence and also, a hostel to Girls Students, Swatik Bungla has come a long way. However, over the years, it has quintessentially retained its existence as a home. The traditional idea of living together holds true here even today, as students from varied backgrounds stay under one roof and share each other's lives. Swastik has changed with time but preserved its heritage, and at the same time given shelter to many more people.



A view of the old wing and the new one.

View of Badminton Court.

The transformed wing.

THE OUTCOME OF CHANGE

The transformation of the wing has been done such that it bears the essence of the original construction. The octagonal plan with windows on alternate walls of the two cantilevered floors is in harmony with the Bay Windows of the bungalow. The blank walls have Ivy clinging to it, which is reminiscent of the English Mansions. The wing which is cantilevered is supported on brackets, which are typical of ancient Indian architecture. The staircase shaft can be seen through a glazed wall, thus, making the structure transparent and open to light. Energy saving techniques have been used to make this building sustainable in today's times.

South East Elevation

Metamorphosis of a WADA