Case Studies – IGBC Green Interiors

Name of the Project – M/s ESSTEAM

Location – Surat

Rating level – Platinum, existing interiors

Occupancy: 55

Concept – An architect & interior designer office on 4 & 5th floors with approx. 5200 sq.ft and partly on terrace. The building is finished in RCC both inside & outside and to allow daylight a 450-mm ribbon window at top & bottom in each floor is running all-round on 3 sides. The 'C' shaped architectural projection created possibilities of storage all along the periphery inside which also takes care of the vertical circulation, sanitation, electrification, plumbing, HVAC & IT. The project has done extremely well on easy to maintain aspect, the fact that all the metal partitions in the studio floor are just stuck with magnet and supports very easily any kind of repairs or replacement / addition of cabling for electrical or LV applications during post occupancy. The project is designed by Ar. Snehal Shah.

The floor plan of 4th floor

Case Studies – IGBC Green Interiors

The floor plan of 5th floor

Example – Salvaged Materials – Old timber is used as conference table top without any polishing avoiding VOC's. The room is designed to access natural daylighting, natural ventilation and with external connectivity as part of outdoor views to occupants.

Example – Salvaged Materials – The waste old paint cans have been innovatively used as pigeon holes at the reception.

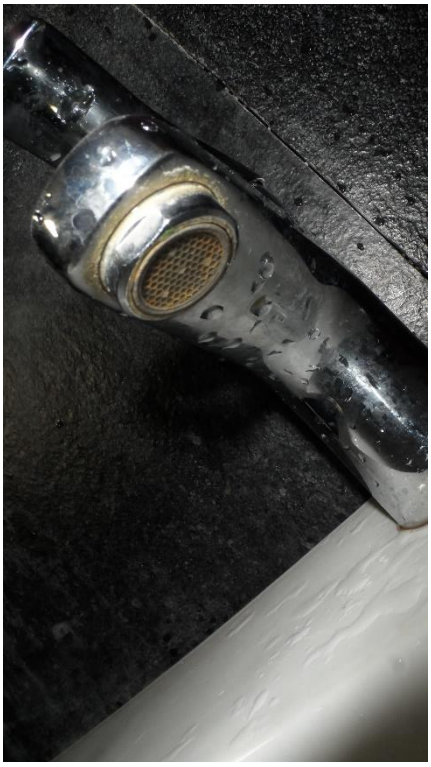
Example – Salvaged Materials – The reinforcement steel waste pieces left over from construction have been welded and used as unique railing to internal staircase in all the floors

Project has installed BEE 5 Star rated unitary air-conditioners in all spaces

100% of the floor plate is fully daylit through top & bottom ribbon windows. This is unique to this building.

100% of the floor plate is fully daylit through top & bottom ribbon windows. The central portion is used as storage space and all the services run behind this magnet partitions, which can be easily removable in the case of repairs or alterations.

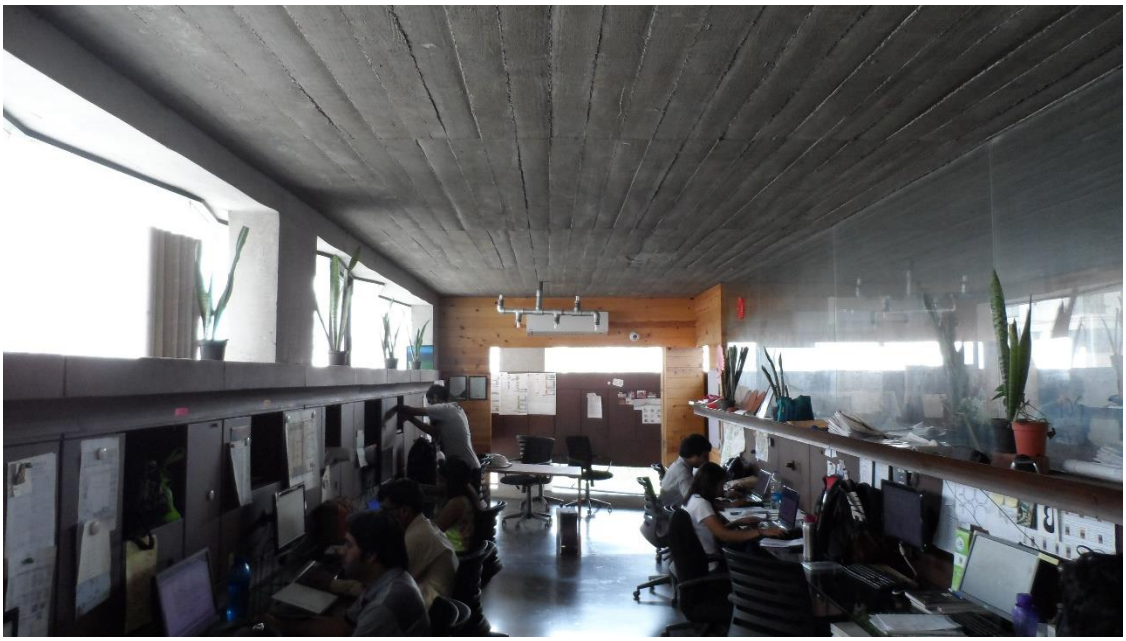
Lighting is uniquely connected through GI pipes without compromising on the lux levels.



Water Efficient Plumbing Fixtures – Taps fitted with aerators, dual flush toilet 6/3, shower fitted with aerators and able to give more than 20% water savings over baseline.

All partitions and doors are made from shuttering timber which was used during construction of the roof. Unique counter weight technique is used as door closer for 100mm thick heavy doors for smooth operation.

The below picture is an example for indoor plants, ergonomics and circulation efficiency. The workstations & overhead storage is designed to suit the studio requirements without compromising on the daylighting. The ceiling is without painting and left RCC finish.



Visitors lounge area. The columns are decorated with rope which is leftover at the construction of this site. Ceiling & wall is not painted left RCC finish.

Case Studies – IGBC Green Interiors

Name of the Project – ASADI Architectural Studio Lecture Hall

Location – Kochi, Kerala

Rating level – Platinum, New Interiors

Occupancy: 120 students (Studio) 40 students (Lecture Hall)

Architect: B.R. Ajit, Ajit Associates Architectural Consultants Pvt Ltd.

Concept – An Architecture Studio cum Lecture hall is built on the Asian School of Architecture and Design Innovations. The studio built on the 1st Floor comprises an area of 260 sq.m is uniquely designed to satisfy the requirements of comfortable working conditions through a very close incorporation of the different elements of nature right from daylight through to ventilation with a distinct approach.

The White Colour Tensile fabric roof by the virtue of its inclination towards north and property of material allows good penetration of light yet blocking the solar heat which gets reflected. The light coming from the roof not only helps while drawing and studies but also enhances the feel of space.

The southern wall is made out of bamboo which shields the heat from entering but at the same time allows the wind to squeeze through the small gaps of bamboo's arranged amongst each other while adding a serenity and natural feel to the environment. The openings towards east and west have been designed in a way to allow the direct penetration of sunlight into the studio.

Flooring has been done with the coconut coir which is a local material and gives a unique aesthetic feel to the space. The coir mat adds good tactile and acoustical property to the space. The project has extensively used salvaged materials that include the cement boards in making the teaching platform and other seating spaces. The studio consumes minimum electricity (for fans, which is rarely used because of good wind round the year and lights required only at night) has been sufficed with a renewable source of energy (Solar power).

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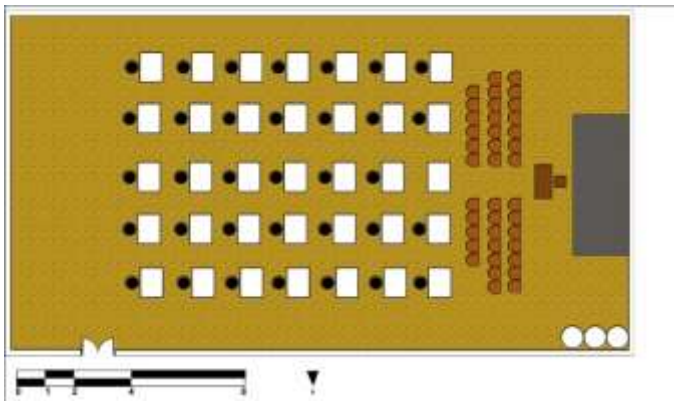
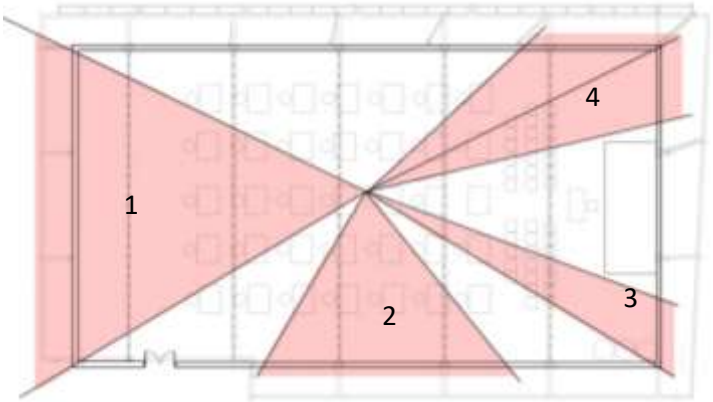


Floor Plan

Outdoor Views :

View 1: Picturesque view of flora and fauna with serene backwaters



View 2: College campus on the Northern Side

View 4: Greenery and limitless sky on the Southern Side

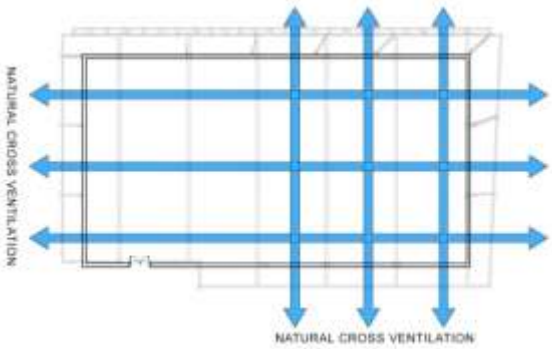
View 3 : Greenery on the Western Side

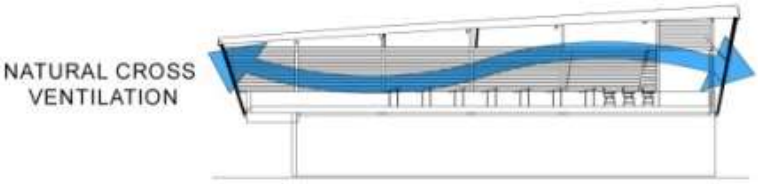
Fresh Air Ventilation:

The use of natural ventilation is definitely an advantage with the raising concerns regarding the cost and environmental impact of energy use.

Since the studio has numerous openings, natural ventilation occurs. Natural ventilation consumes less energy than a comparatively mechanical ventilation system.

With natural ventilation, optimum utilization of the building floor plate and floor to ceiling height, since there is no need for space for large air handling units and equipment rooms.

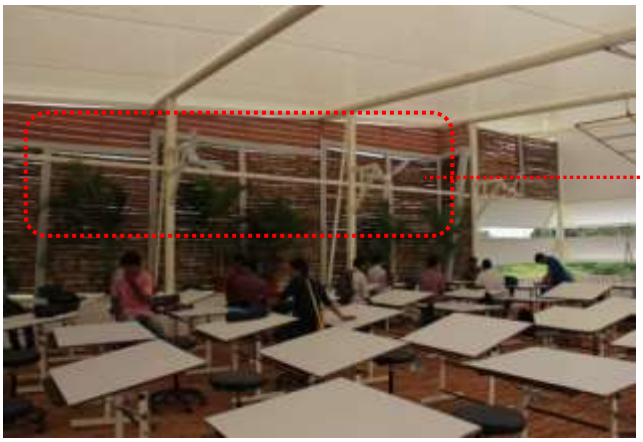




Materials:

The usage of local materials have been extensively practiced in terms of materials like bamboo, but not limited to it. Bamboos have been used to make walls on the Southern facade & also partially on the East. But other than that materials like Coir Carpets have been used to lay on the floor. These carpets are made out of Coconut Coir, which is a predominant form of Vegetation in the Region being coastal areas. Moreover, the processing of these materials to be converted to a building material & component takes place much locally adding to the lesser carbon footprint in terms of Transportation.

Bamboos were sourced from nearby areas in the range of 25 kms & the Coir Mats from areas within a range of 5 kms.

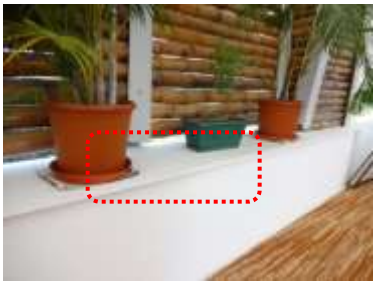


Wall with Bamboo on Southern side

Coir flooring

Energy Efficient Fans

Residual Bamboos used as craft elements



Seating platform designed out of waste shera board

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Teaching Platform with Salvaged materials

Bamboo Wall

3 kW - Solar Panels installed to meet 100% of Studio energy requirements

Case Studies – IGBC Green Interiors

Name of the Project – AW Design

Location – Ahmedabad

Rating level – Platinum, New interiors

Occupancy: 10

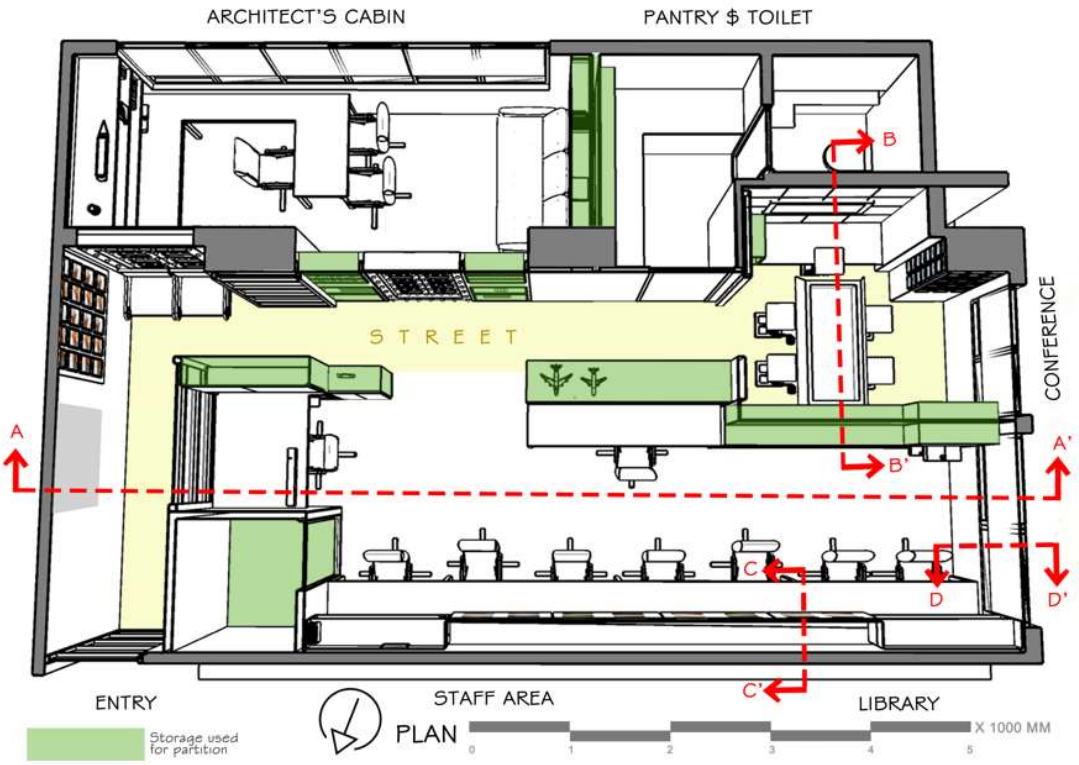
Concept – 'An Architect's Workspace, adaptive reuse of waste and salvage materials making environmental and financial sense by going green.' Area 700 sq.ft

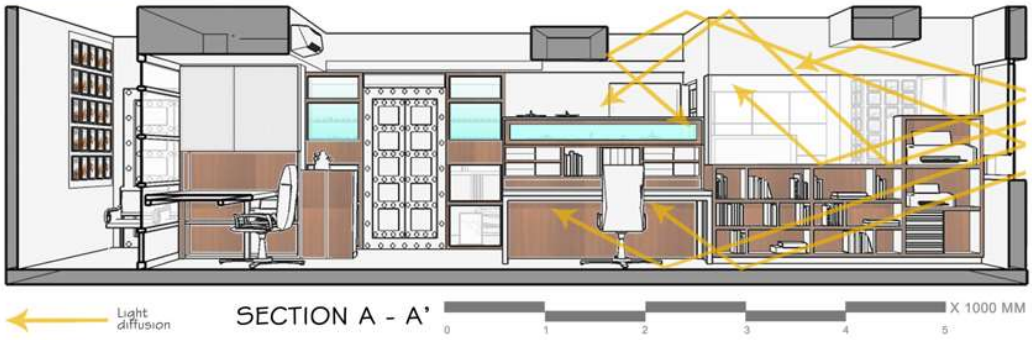
Design program / requirements: Interior design for an Architect's studio based in Ahmedabad. Team seating of upto 10 members, including a manager, open plan seating adaptable to discussion, lecture and model making needs, store, no vestigial spaces like reception, room for studio head with workstation and discussion table, guest seating in head's room and two person seating for waiting guests, meeting room with a standing table and 5 person seating with AV facilities, library, pantry and powder toilet. Storage for documents, soft boards facing team members and some storage for scale models of cars and aircrafts. Our IGBC Platinum rated workspace 'walks the talk' and proves that going green is not only good for the environment, but also saves money.

CONCEPT AND SPATIAL DESIGN :

We believe great work needs great influence. Greatest influence comes from what we see around, it allows us to think openly and broaden our horizons. We wanted our office to be evocative for the senses, be a source of learning for the team and appeal to the clients alike. We wanted a workspace that reflected upon heritage of rich wood working craft in the city at the same time felt contemporary. As one enters the office, they are greeted by an A0 sized art installation which is map of walled city made with laser cutting. This sets the tone for a heritage oriented visual narrative, which has old sofas, intricately carved 100 year old doors falling onto our circulation spine that we call the 'Street'. This culminates like every street does in a nukkad which for us is our meeting room. Of course one meets people as they traverse through the street. Since the studio head is an automotive and aviation enthusiast, we thought of tastefully designing some display areas for his scale models. Often these models become centerpiece of conversation and stories around them inspire the team. Various figures from the profession and otherwise who have helped us shape our practice have found their frames on a cozy 'inspiration corner' in our meeting room. This space also serves a break out area for our team. Having modest dimensions of 8' x 10' we installed a bronze mirror to cover an entire wall of meeting room, this gives illusion of space being much larger. Our meeting area shares a long wall with staff area and uses a book library as main Partition. Glass above this partition gives panoramic view of the office. As an experiment we kept our meeting table height at 42" so that most of the meetings are conducted standing up and to the point. This also offers opportunity to stretch the legs,

of course if one is tired they can simply sit on the bicycle stool. Our team area is flexible and offers ample room for the team manager and upto 10 staff members who can choose to work, make models, engage in discussions, attend lectures or simply gaze outside.





CROSS LIGHTS - Cross lights are diffused to reduce glare and cross placement over the office space facilitates uniform distribution of General light.

TASK LIGHTING - The installation of concealed task lights above the staff table erradicates the use of other lights thus reducing Watts per unit area.

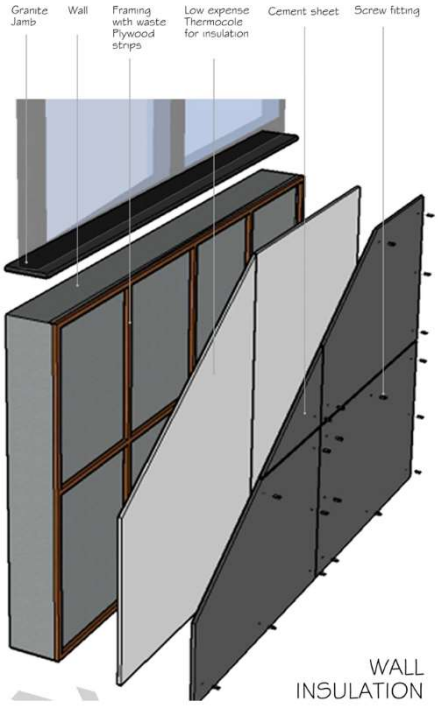

View of staff area


View of 'Street' from entry

Studio lead's cabin is semi transparent and tucked away between two odd sized columns. He has his workstation and discussion table with a sofa from 1948 as main furniture of his room. Partition between his room and pantry is a cabinet. We had to design with low capital expense at the same time incur low operational expense. We chose to go with wood based finishes, white colour and white metal frames for worktop support. Combined with the developer installed ivory flooring this made our office well lit and gave an enhanced spatial appeal. Our approach has been to reuse, and procure materials from salvage for fitout, this includes veneer, plywood, MDF, MS pipes, Upholstery, soft boards, glass, mirror, back painted glass, paints, thermocole, tiles, sofas, doors, light fixtures etc, all locally sourced to reduce transport related carbon emissions.We have happily learnt that carbon foot print can be reduced to a great extent by simple steps like extending the usage life of building material and using inexpensive aerators to save water.
Entire fitout is done from waste / reused / salvaged materials (except ACs, Computers and seating systems). We sourced ply from salvage vendors, veneer lot is of showroom displayed sheets, tiles from factory rejects, glass from salvage dealer, upholstery from fabric catalogues, Table MS frames and meeting room seating from Metal scrap, insulation from common thermocole, blinds and softboard reused, Mirror from salvage, ceilings unpainted, paint and polishes VOC free & from site leftovers, doors salvaged from timber scrap, light fittings from our ply waste, scale markings from waste MDF cutouts. Simply put, we extended the usable life of products by rehoming them in our workspace. By doing so, not only did we match the Environmental and Social bottom lines, but also Financial ones.

GREEN FEATURES:
1. All interior fitout done with material sourced exclusively from salvage and construction waste.
2. 72 year old sofa, 100 year old doors, glass from salvage yard used.
3. Average temperature difference on external and internal wall surface reduced by 15 deg, by simple application of 18mm thermocole sheets on interior side.
4. 95 % material used was manufactured locally
5. Over 75% of our construction waste used within our site. 0% waste sent for landfill.
6. Annual water savings 39%
7. Over 20% energy savings
8. Light fixtures built out of waste plywood cutouts
9. Over 35% reduction in Fixture wattage over base line specified by the Energy Conservation Building Code
10.Overall 55% cost savings by adaptive reuse of salvaged, repurposed and construction waste material.

Case Studies – IGBC Green Interiors



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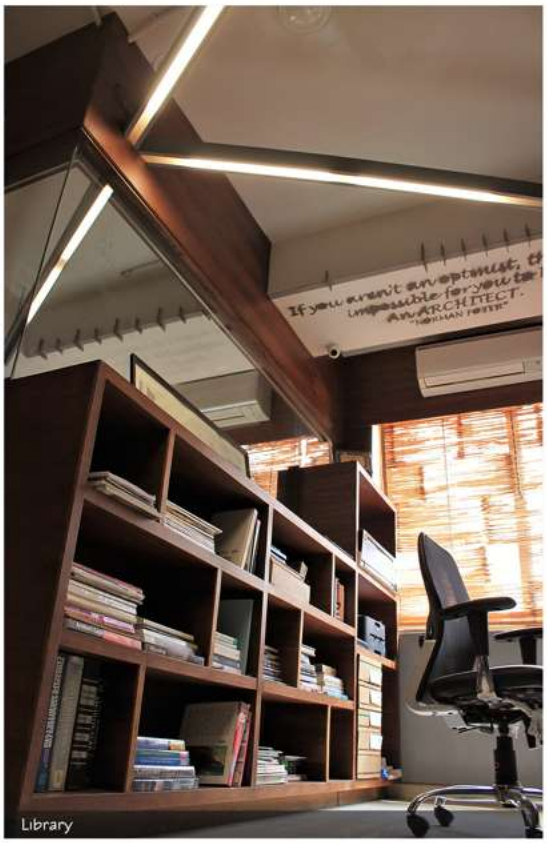
Team area


Library


Place to learn and celebrate


180 years between the door and sofa

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Suspended lights


Team workstation


Entry point


Manager's seating


Inspiration corner, meeting room


Looking towards street


Artwork - walled city map in waiting area


Head's Cabin