

# BALMITAR ECD CENTRE

## NEPAL

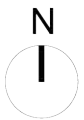


# SITE

**ECD (Early Childhood Development) Centre**  
BALMITAR  
NEPAL

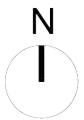
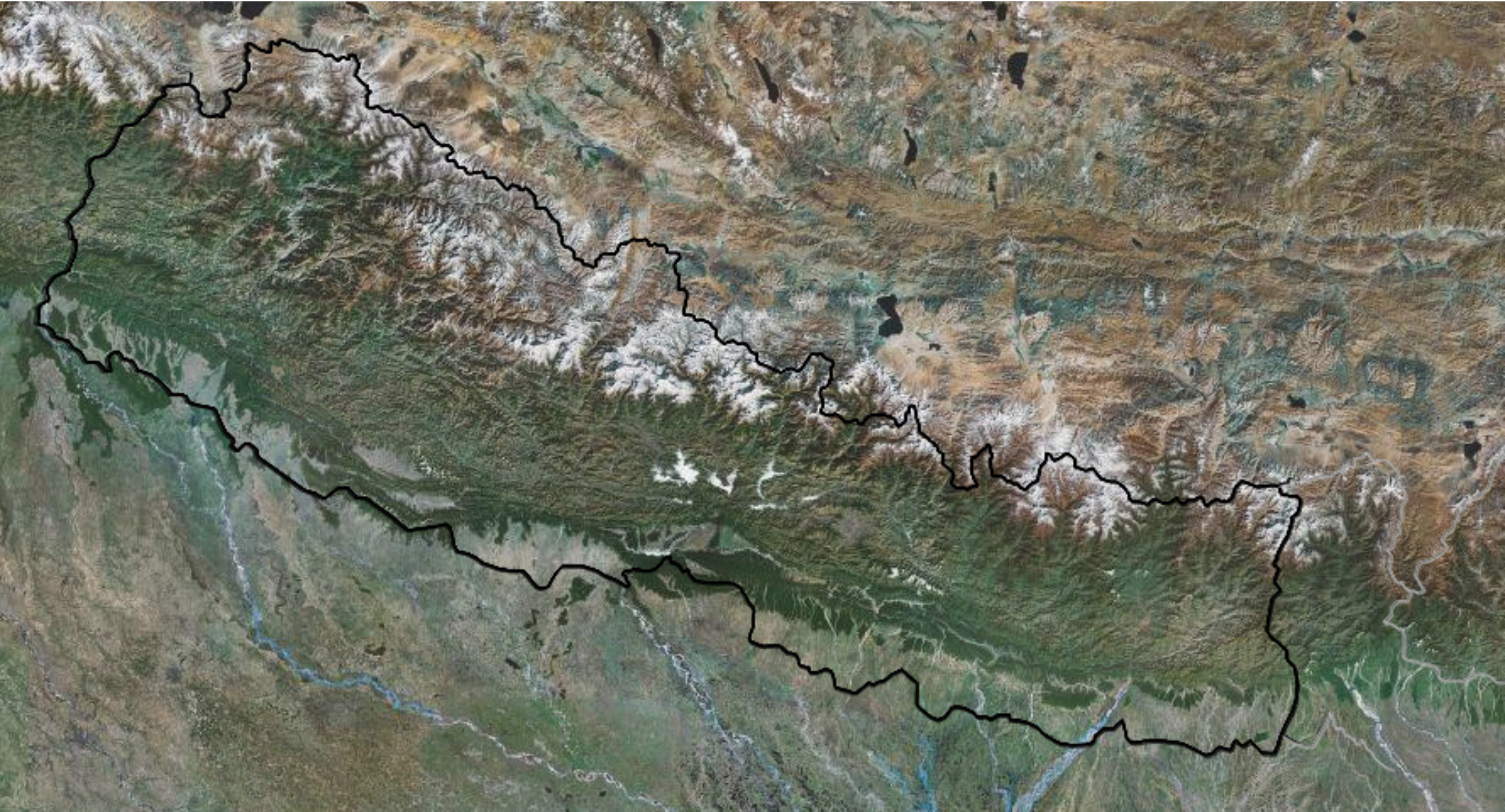


# NEPAL





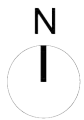
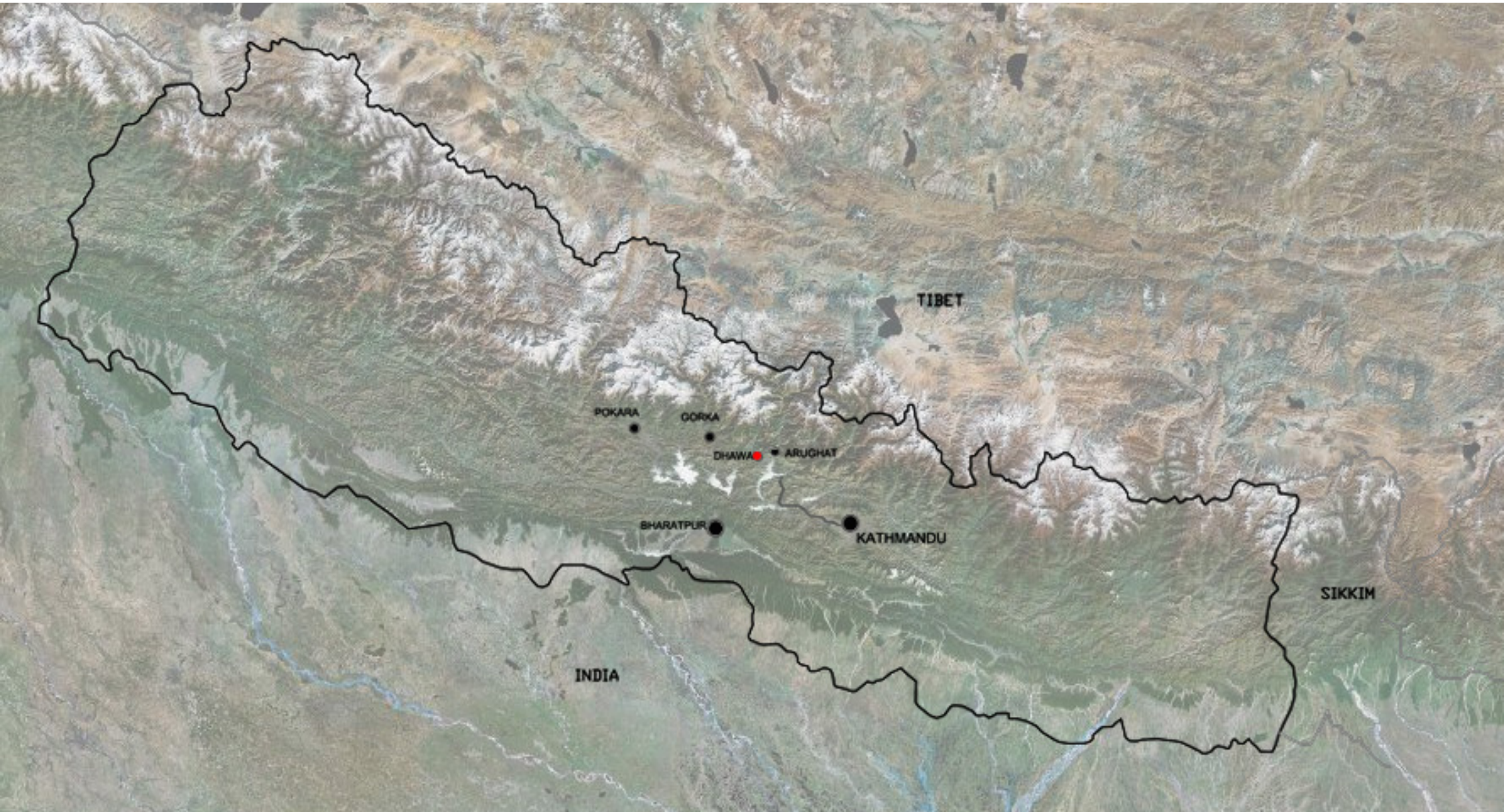
# NEPAL



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# NEPAL





## NEPAL PHOTOS



Nepal landscape



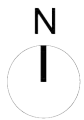
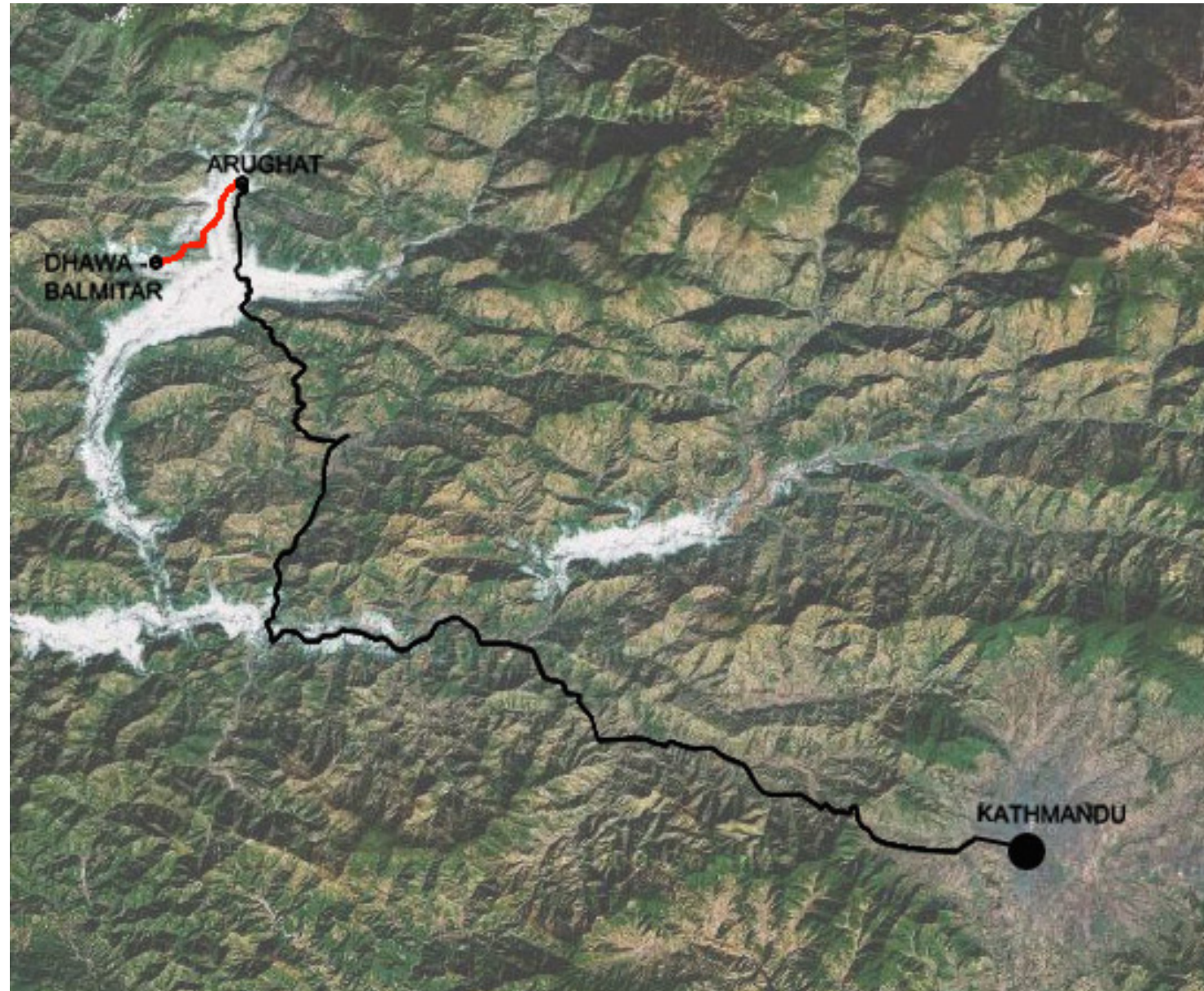
Nepal Buildings





## KATHMANDU - ARUGHAT

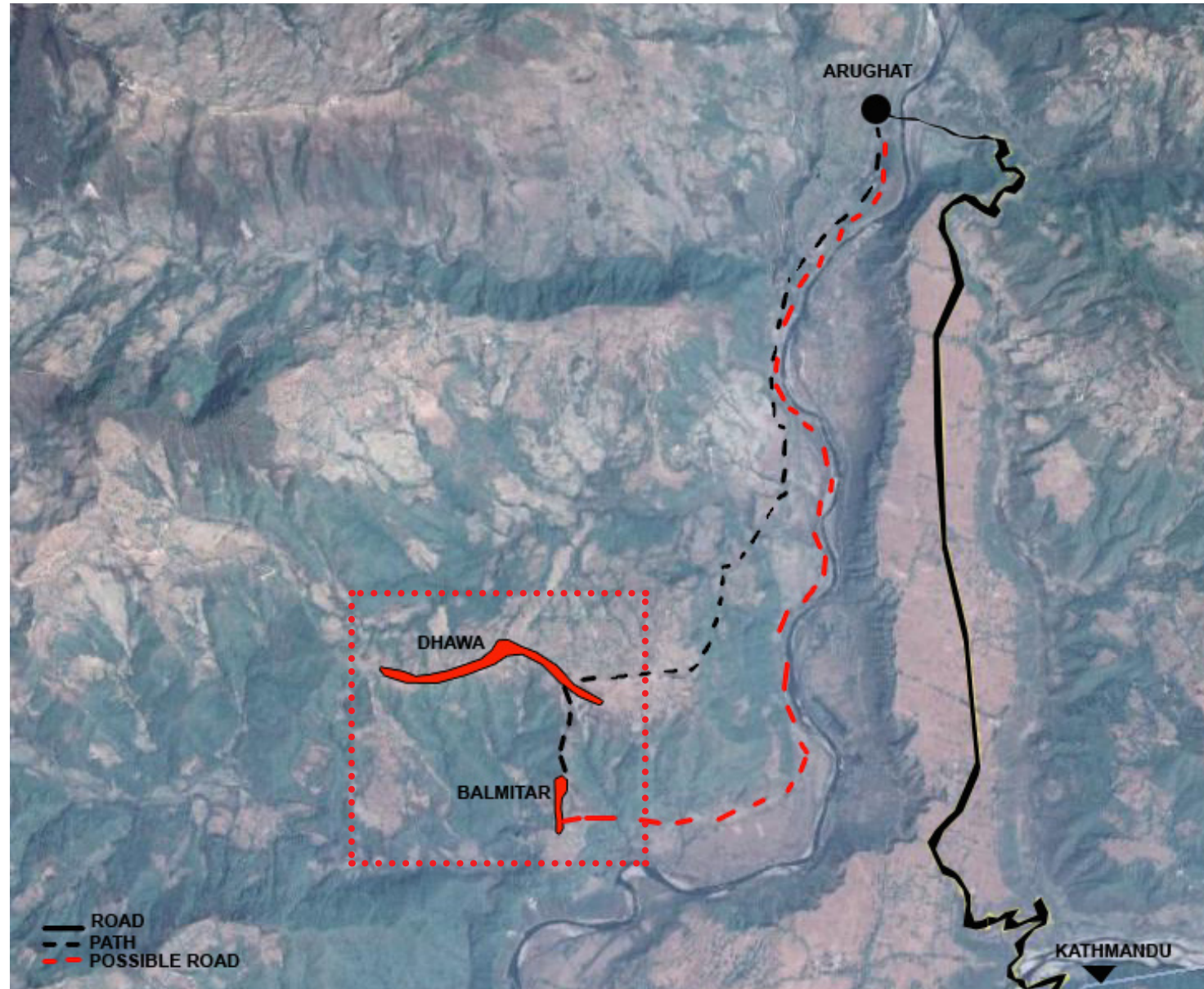
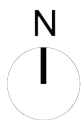
To get to Dhawa / Balmitar, it takes 8 hours by bus from Kathmandu to Arughat, village where the road stops. Then you have to walk.



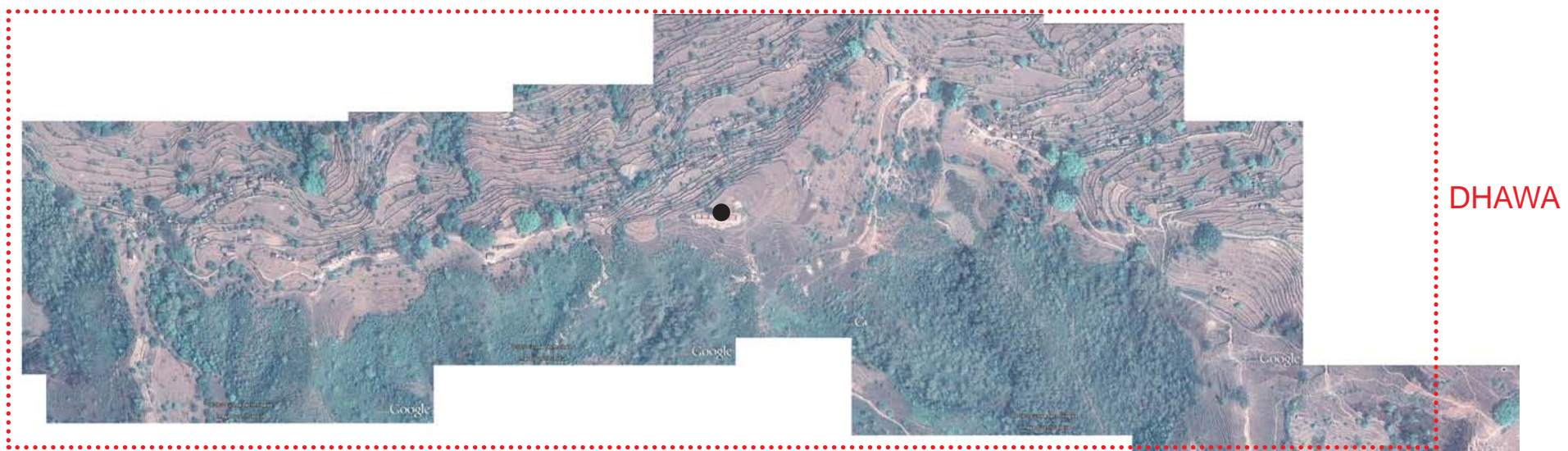


## ARUGHAT - BALMITAR

From Arughat it is a 2 hours walk uphill to get to Dhawa in the dry season. During the monsoon you usually have to walk 10 hours across the mountains.

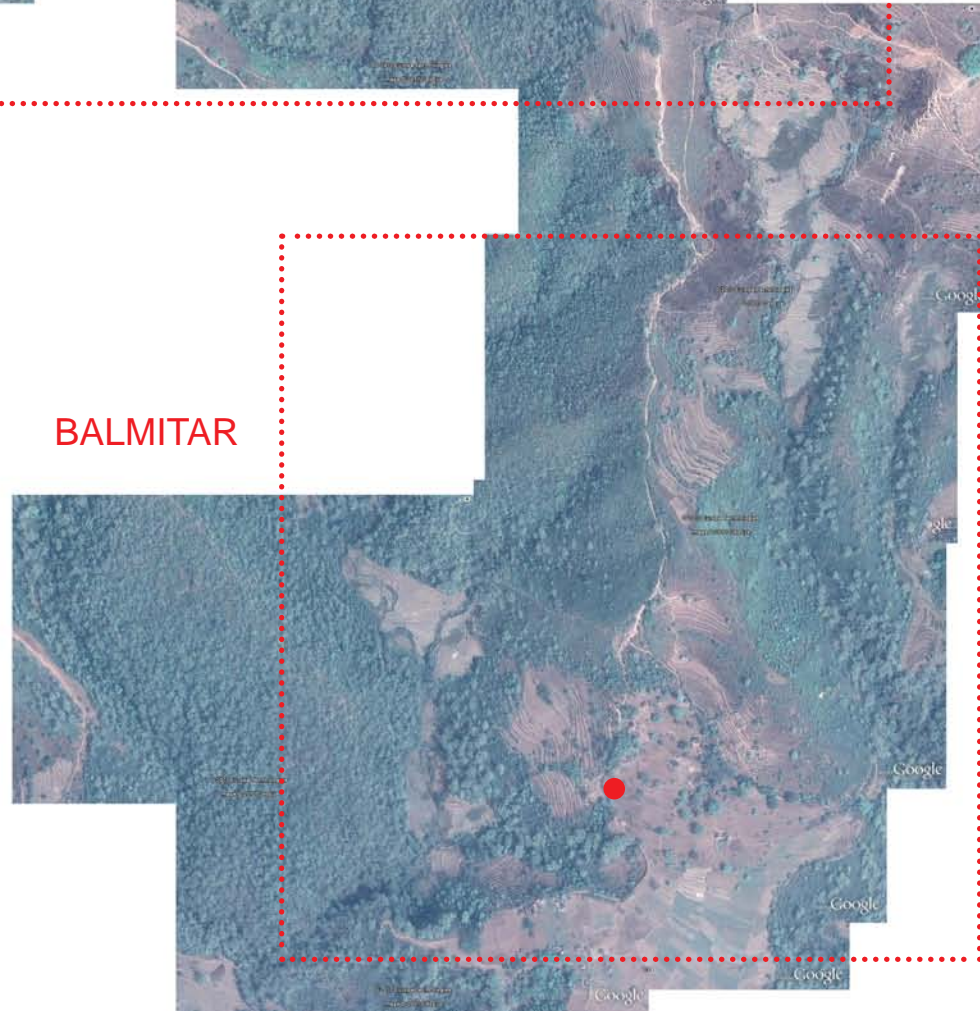




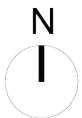


DHAWA

BALMITAR



- Main primary school in Dhawa
- The ECD centre site in Balmitar





## LEARNING PLANET IN DHAWA



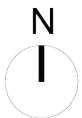


# DHAWA



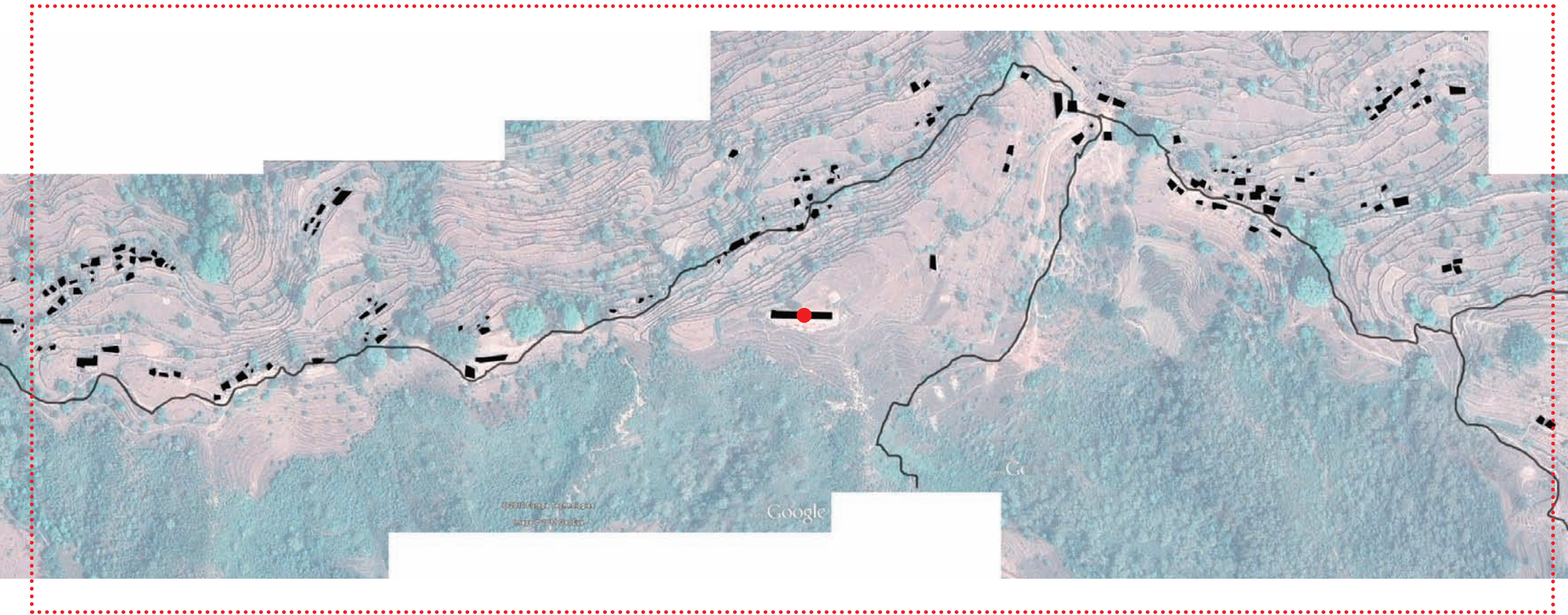
● Main primary school in Dhawa

TO BALMITAR





# DHAWA



● Main primary school in Dhawa





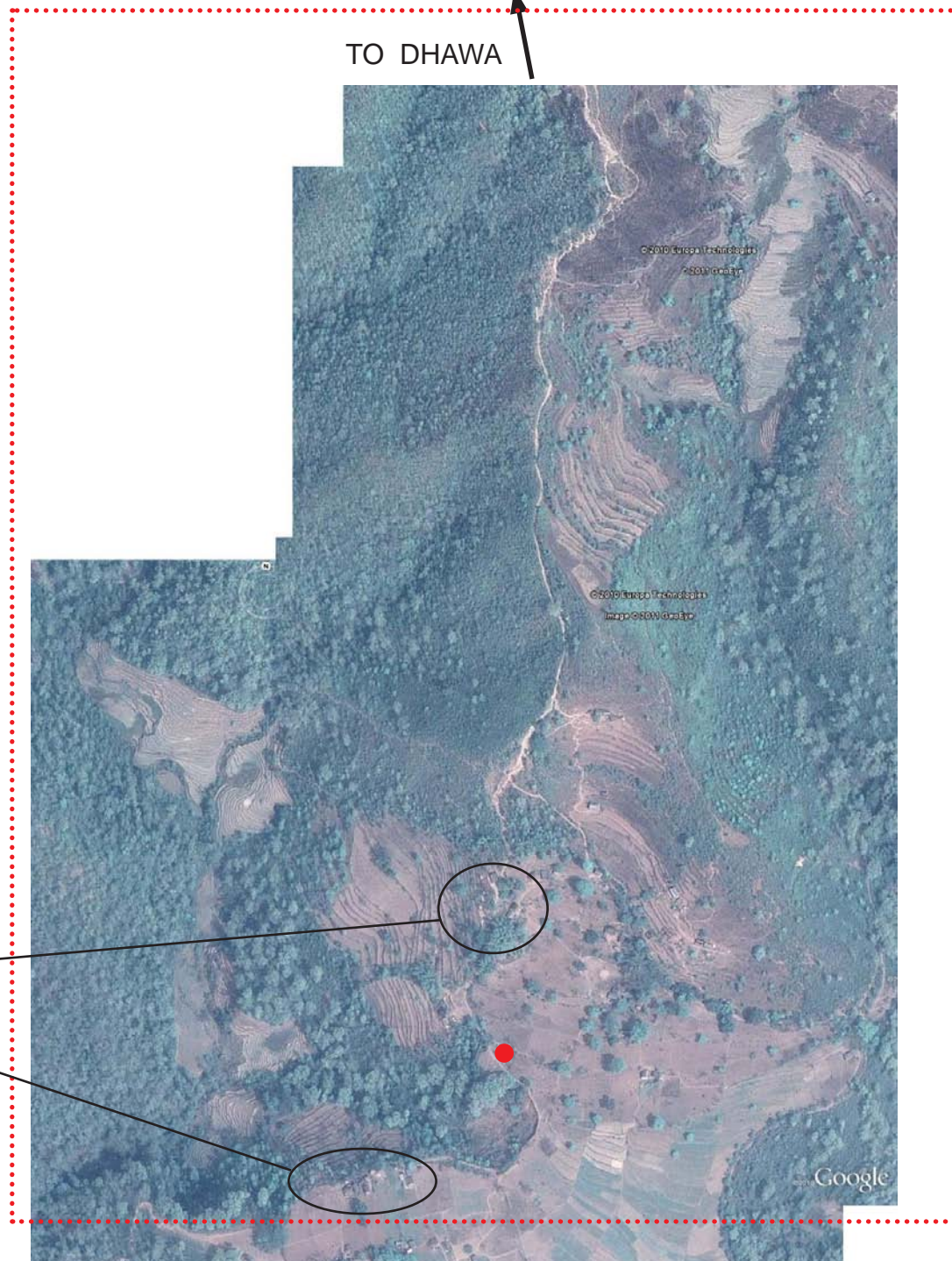
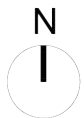
## BALMITAR

To get from Balmitar to Dhawa it is a 2 hours uphill walk, which is too dangerous for 3 to 5 years old children. They stay at school in Balmitar.

The new site is located between the two main areas of Balmitar village.

● The ECD centre site

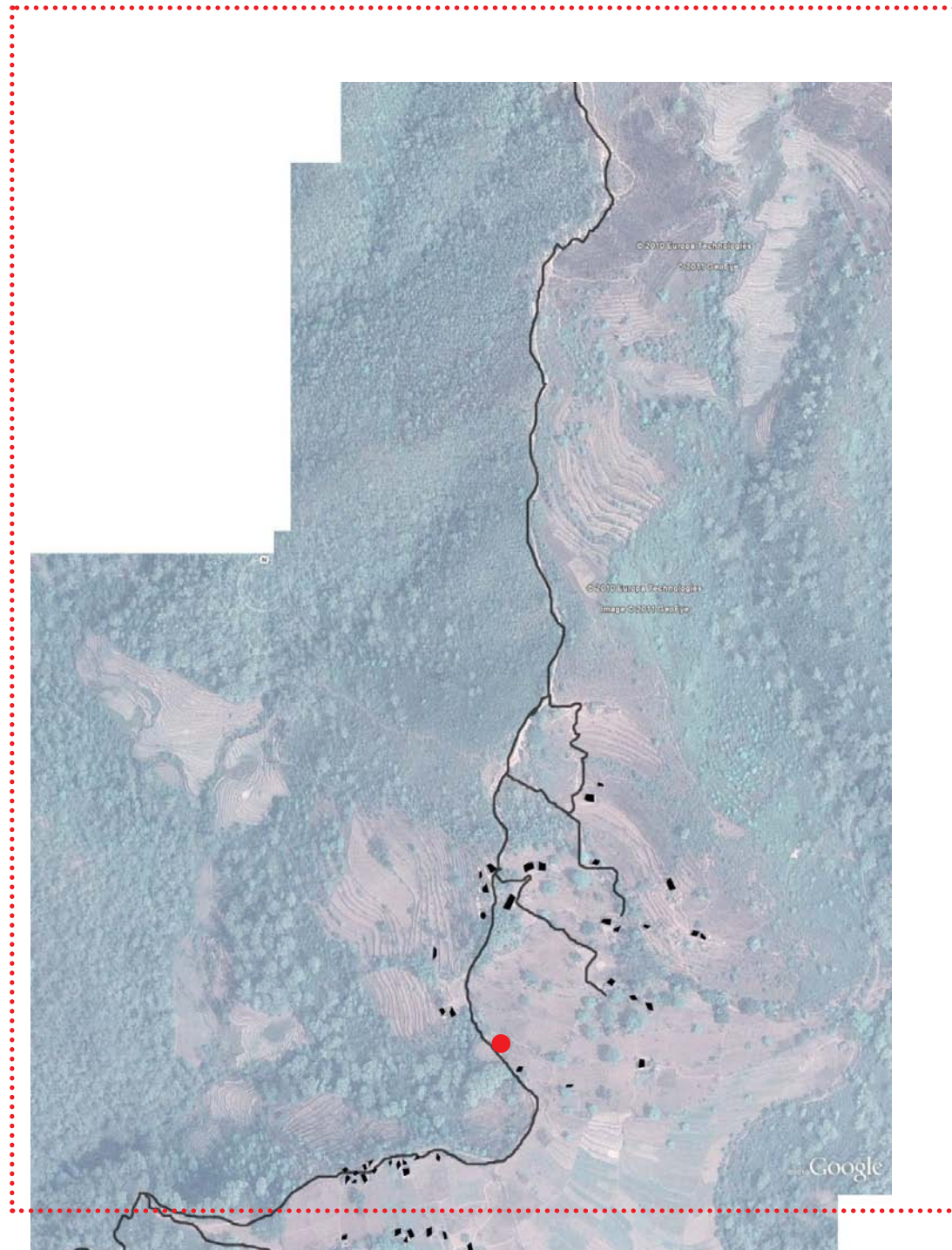
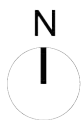
Main parts of  
Balmitar village





# BALMITAR

● The ECD centre site



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## DHAWA PHOTOS



Dhawa village



Buildings



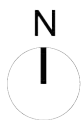
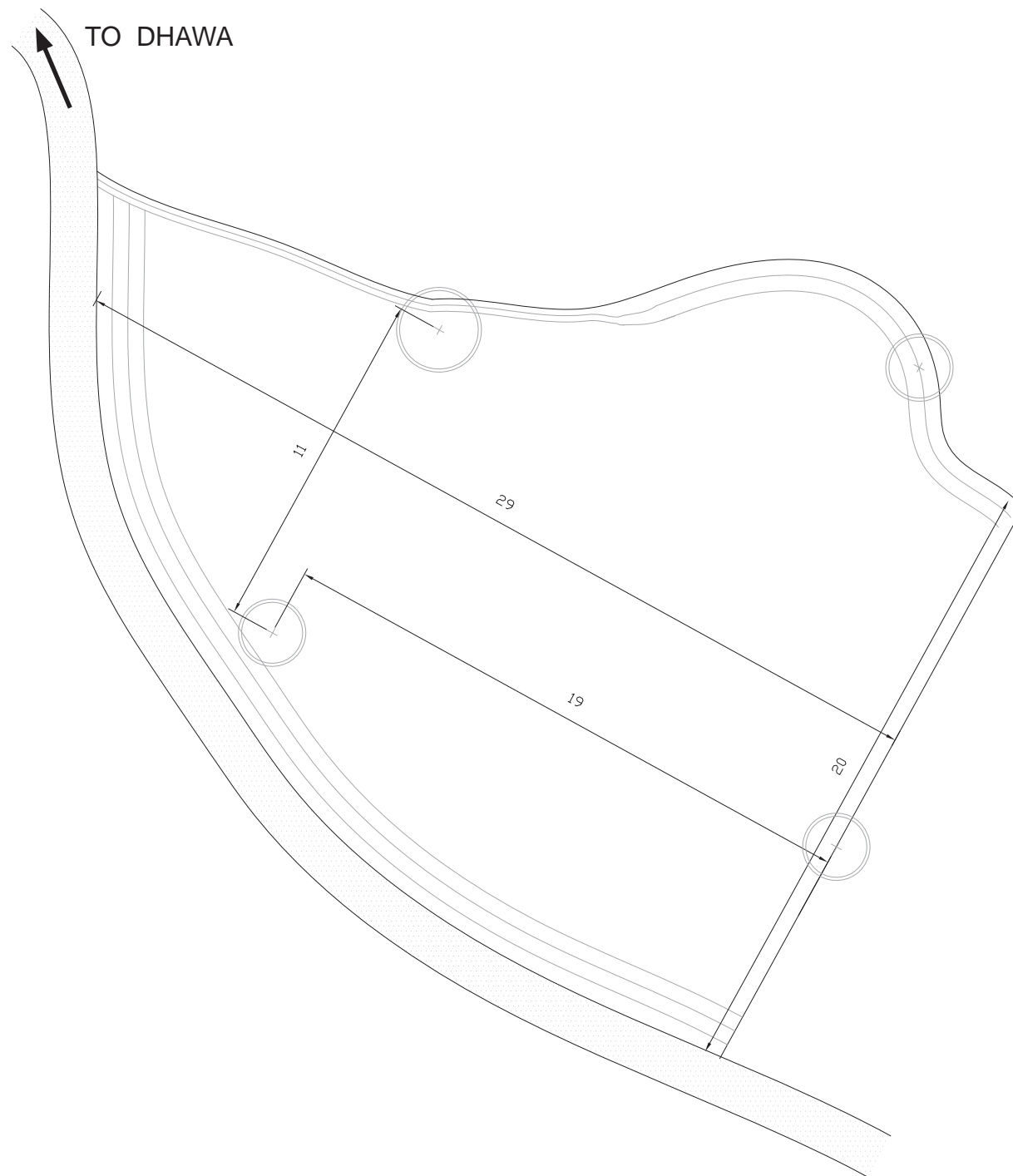
## BALMITAR \_ ECD centre Site



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# SITE PLAN



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## SITE PHOTOS



Arriving to the site from Dhawa, North.



The site view from North / West



## SITE PHOTOS



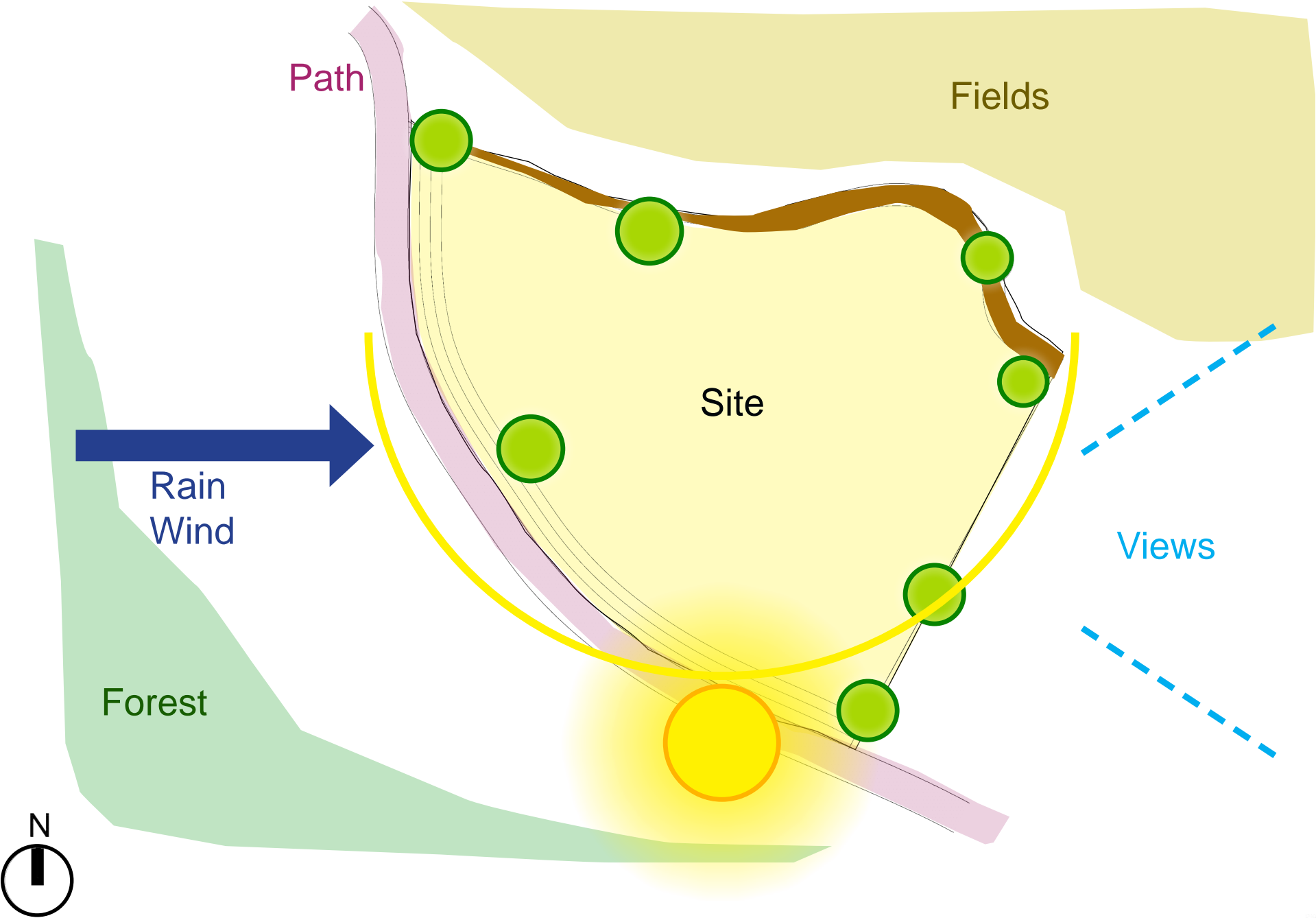
Communal land in front of the site



The site view from East and top

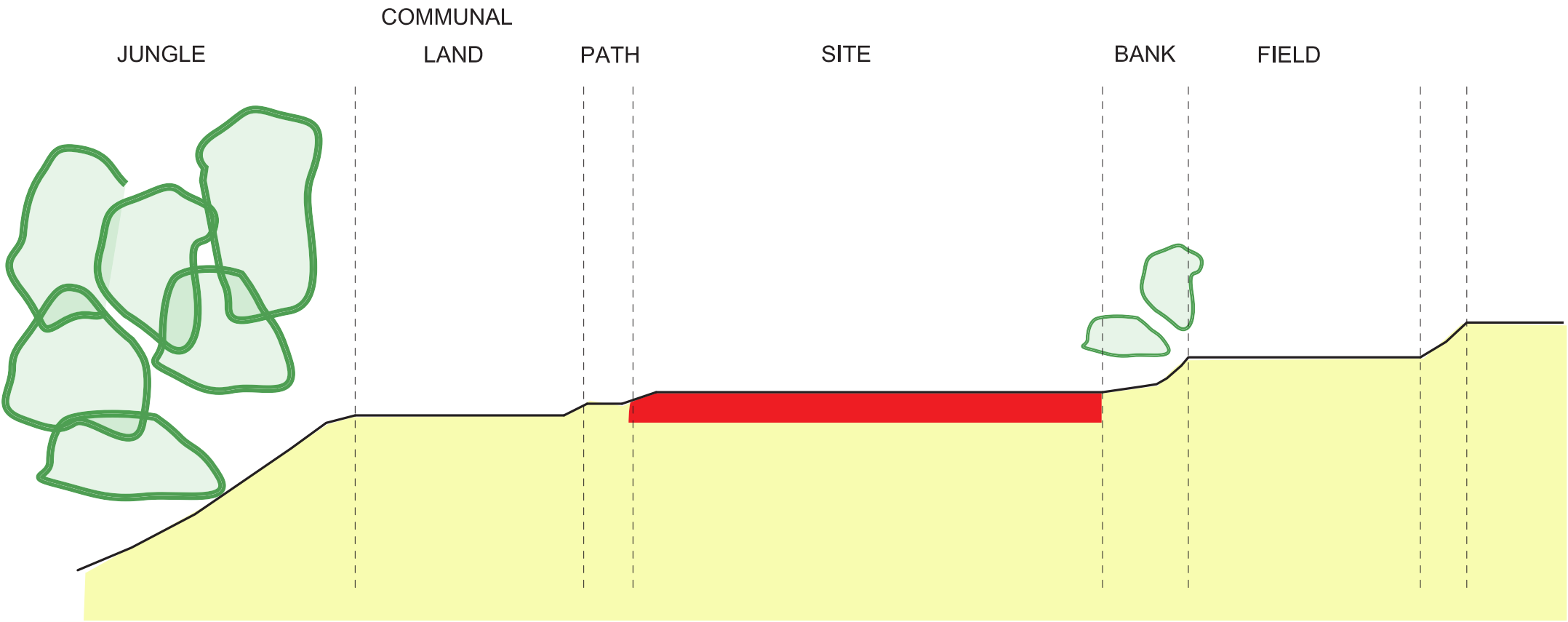


SITE Analysis





SITE Section



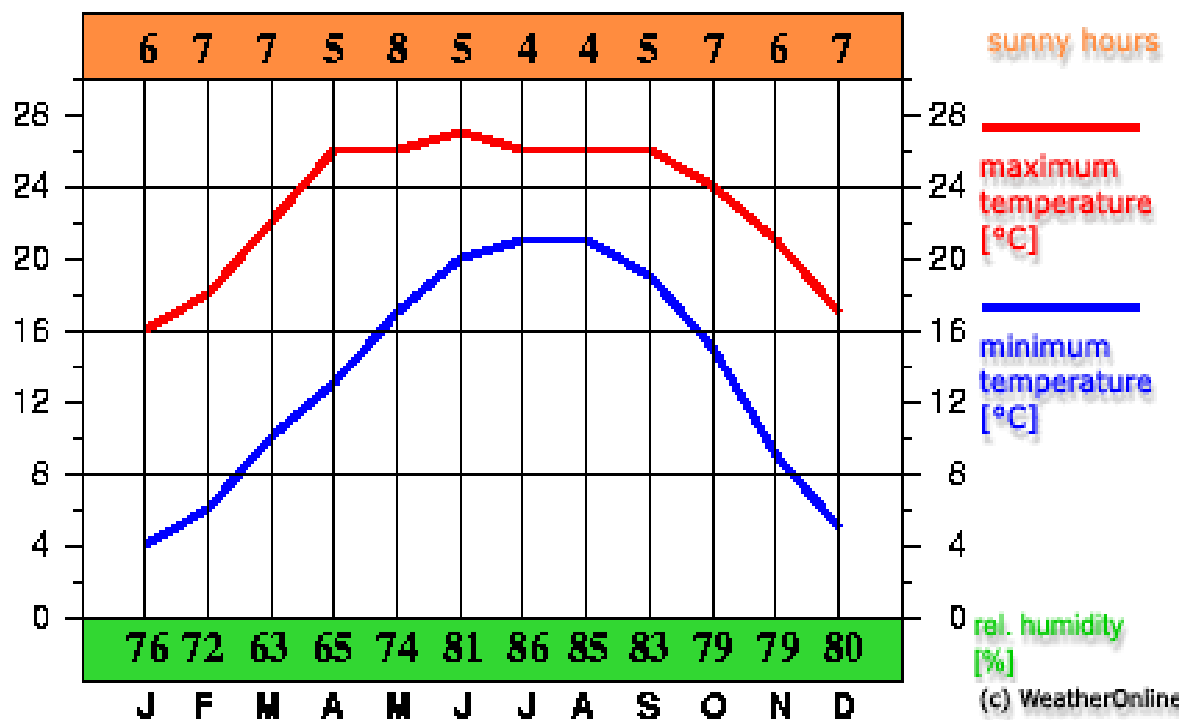
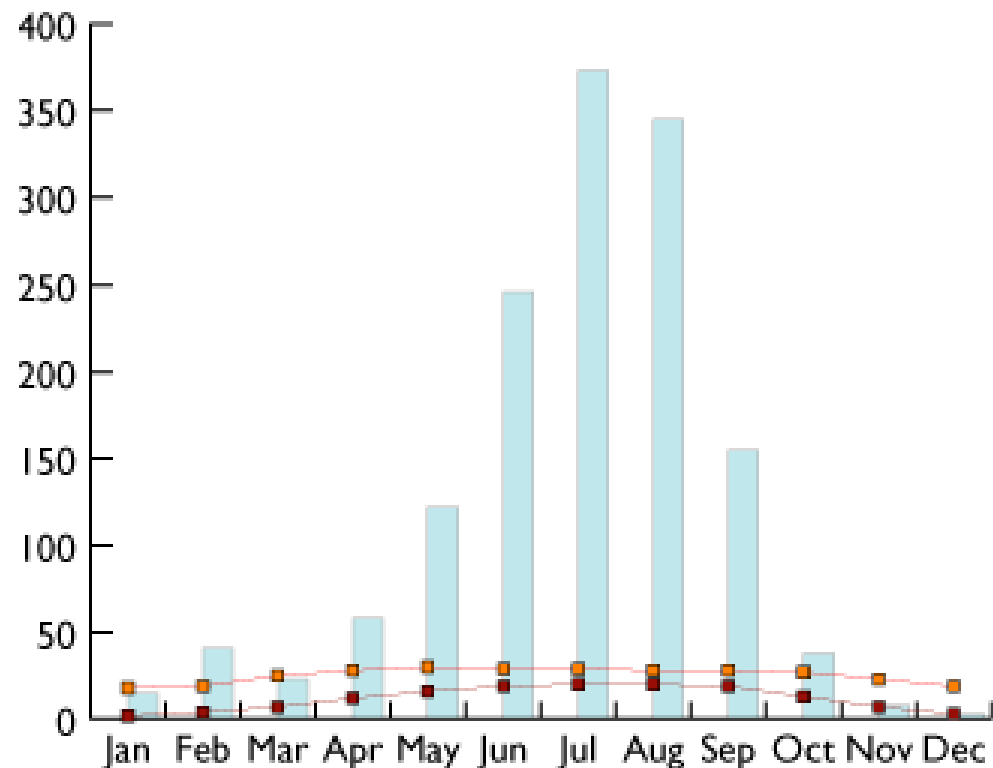


# CLIMATE

- rainfall
- average daily temperature (max)
- average daily temperature (min)

Temperature (celsius)

Rainfall (mm)



sunny hours

maximum temperature [°C]

minimum temperature [°C]

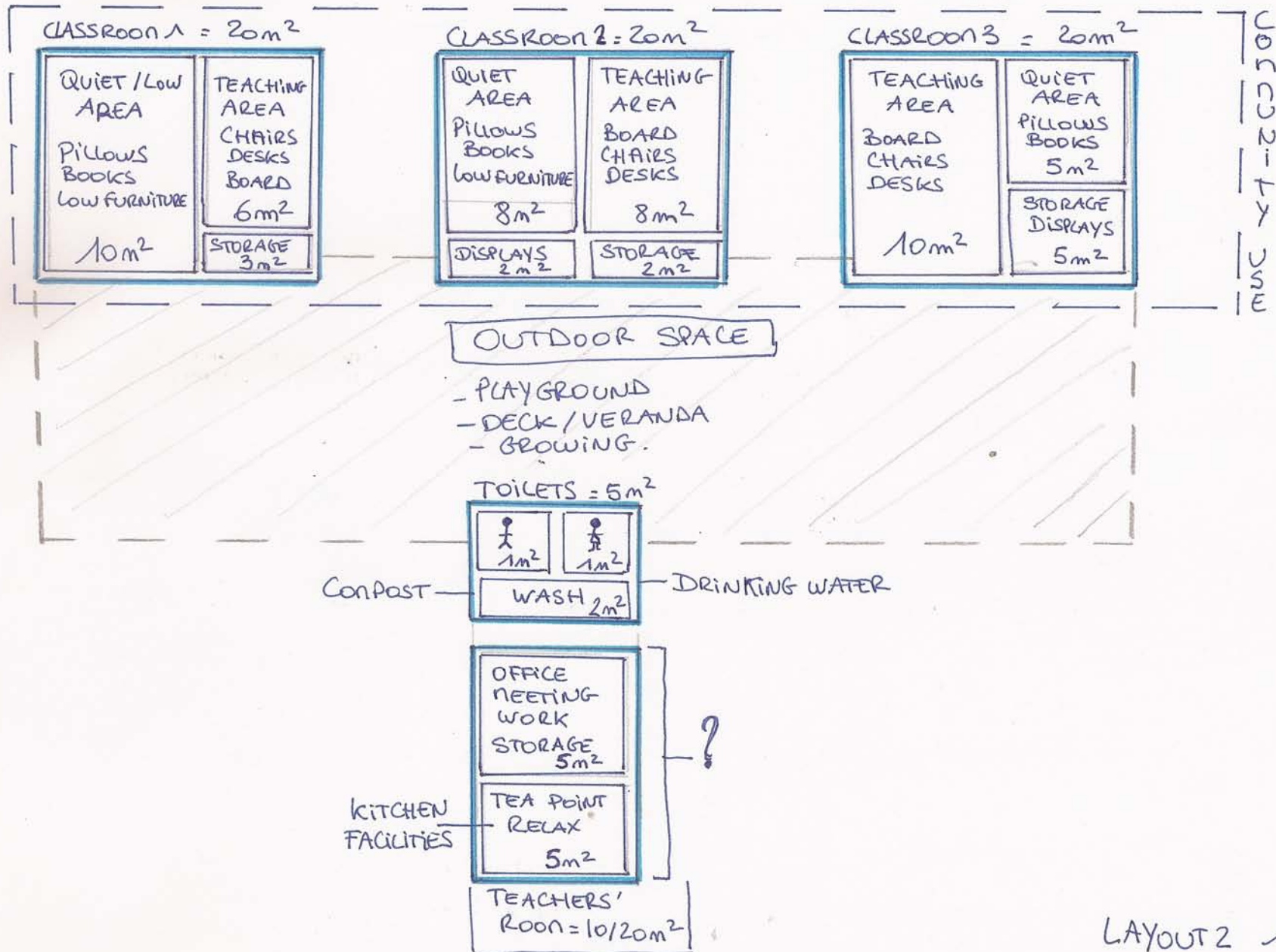
rel. humidity [%]

(c) WeatherOnline

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# THE BRIEF





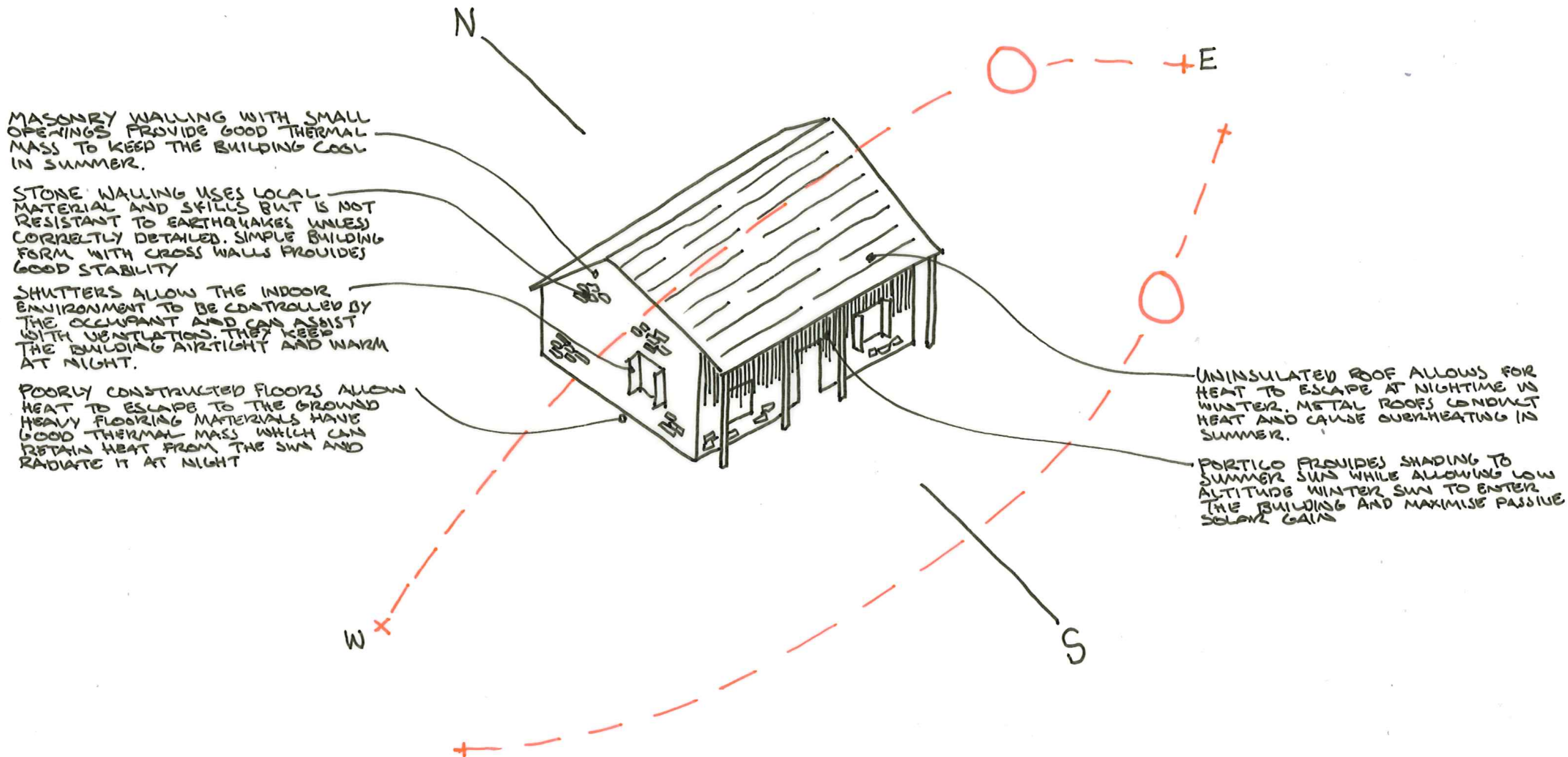
# CONCEPT/CURRENT DESIGN, MATERIALS & SUSTAINABILITY

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BALMITAR  
NEPAL



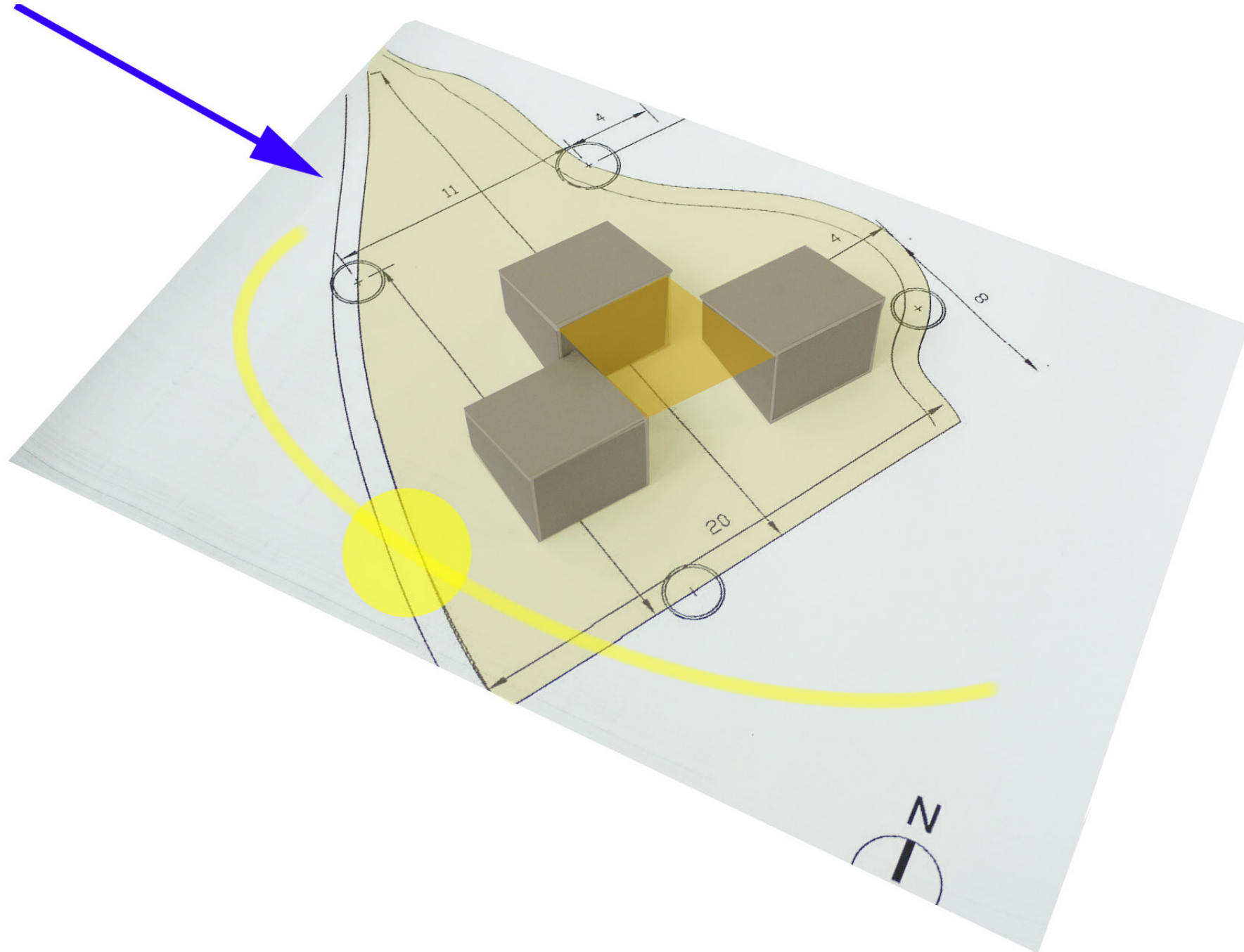


## EXISTING TYPICAL CONSTRUCTION





# SOLAR DIAGRAM



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## LANDSCAPE SITE PLAN



### Option 2:

- Three small buildings linked by a overhole roof.
- The nursery is treated as a special building.
- The two other classrooms can be open to each toher to create a bigger space.
- The internal covered courtyard creates a gathering and communal space.



## MATERIALS



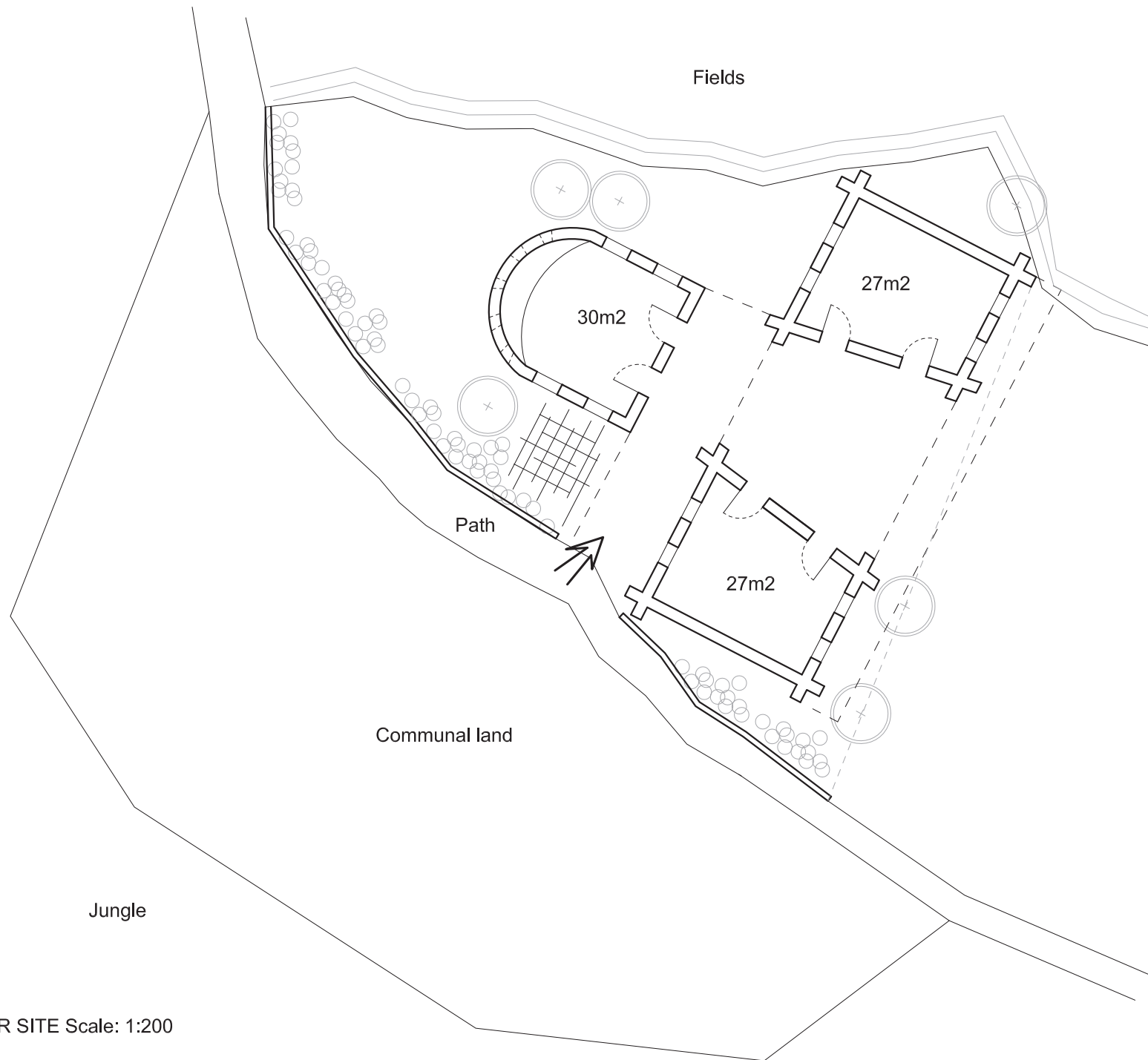
Stone walls and timber structure for roof



Bamboo screens for openings



# PLAN



BALIMTAR SITE Scale: 1:200

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# TYPICAL CROSS SECTION SKETCH

SLATE ROOF USING LOCAL  
CRAFTS-PEOPLE. ON MORTAR BED  
MEANS ROOF ACTS AS A DIAPHRAGHM  
BAMBOO FLATTENED TO FORM ROOF LINING

CONTINUOUS WALL PLATE AT EAVES LEVEL

CONTINUOUS REINFORCED CONCRETE  
RING BEAM AT EAVES, LINTEL  
AND GROUND LEVELS.

OVERHANGING EAVES PROVIDE SOLAR  
SHADING TO STONE WALL  
GUTTERING TO BE DESIGNED TO PROVIDE  
ADEQUATE CAPACITY FOR RAINWATER  
HARVESTING TRADITIONAL NEPALI  
DECORATIVE EAVES DETAILS TO  
BE INCORPORATED

CONTINUOUS REINFORCED CONCRETE  
RING BEAM AT EAVES, LINTEL  
AND GROUND LEVELS.

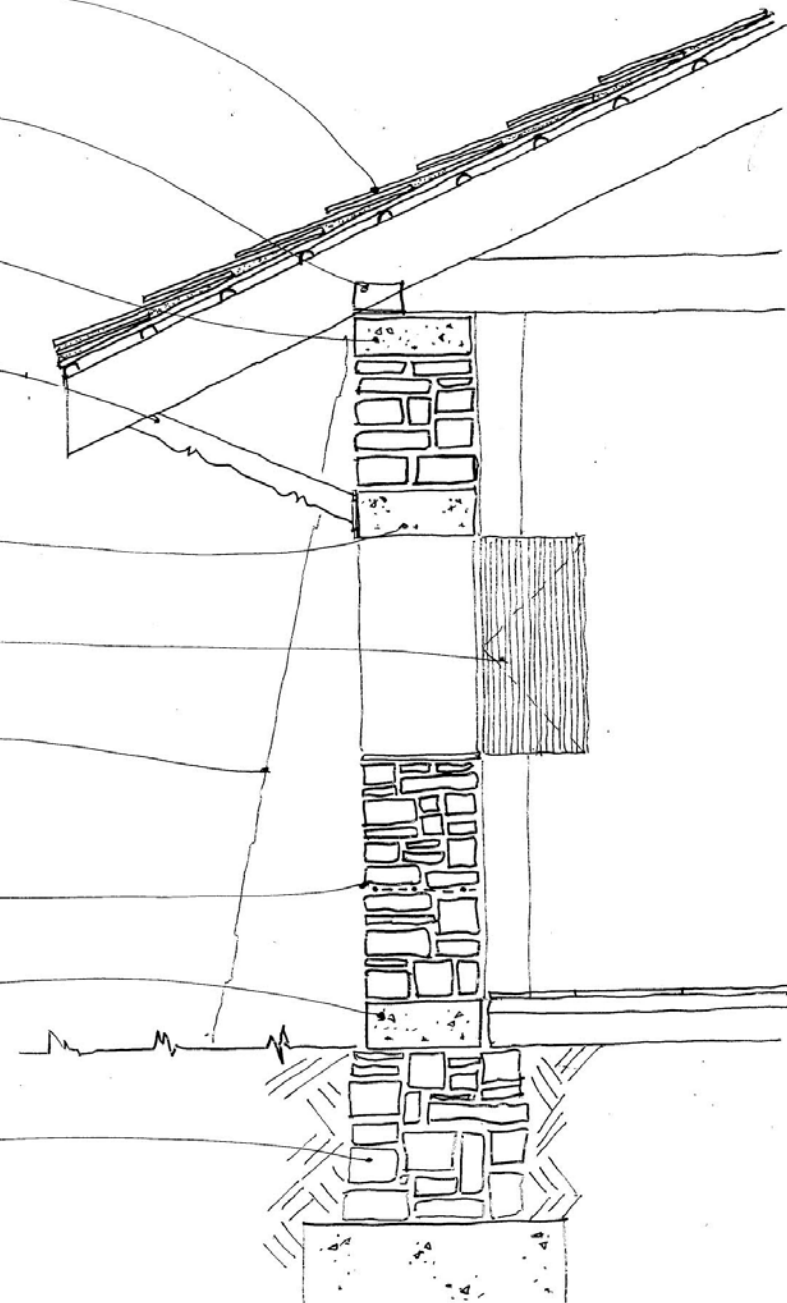
BAMBOO TO BE USED TO WINDOW  
SHUTTERS AND SCREENS INTERNALLY

BUTTRESSED CORNERS  
PROVIDED TO STONE WALLS  
AND TO LONGER WALLS FOR STABILITY

STONE WALLS BROUGHT TO COURSE AT  
MIN 600MM INTERVALS AND PROVIDED  
WITH BED JOINT REINFORCEMENT

CONTINUOUS REINFORCED CONCRETE  
RING BEAM AT EAVES, LINTEL  
AND GROUND LEVELS.

750MM WIDE MASONRY  
AND SAND CEMENT RISING WALL  
ON 1000MM WIDE BY 300MM DEEP STRIP.



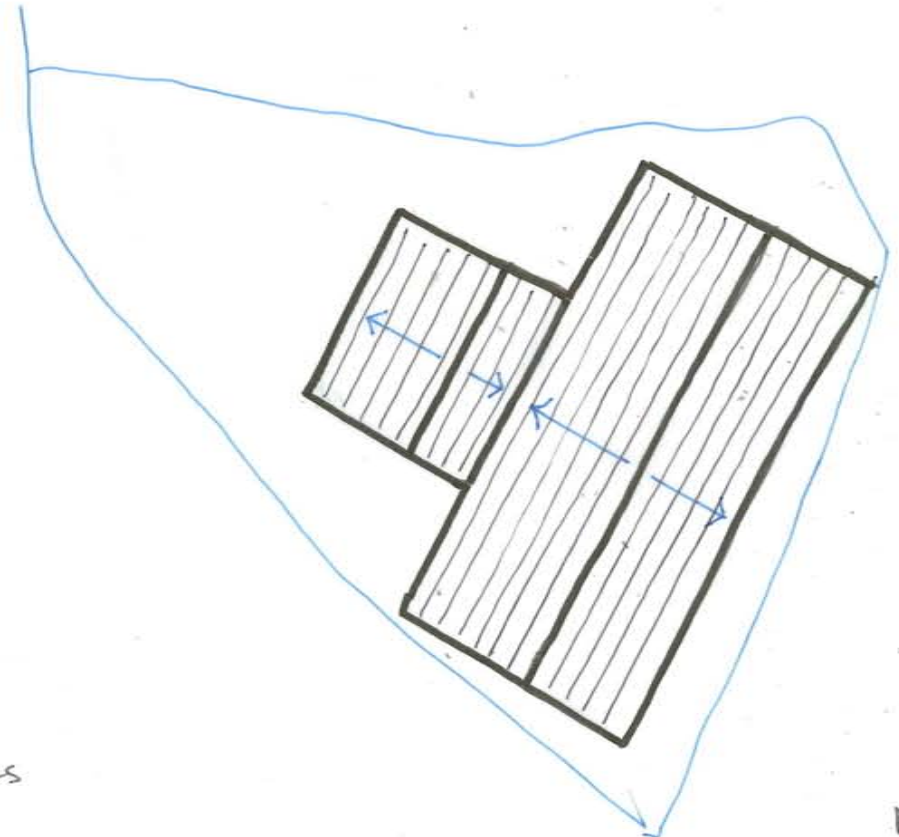


# ROOF SKETCHES



- PRIMARY SPAN
- - - ROOF OUTLINE
- - - CLASSROOM OUTLINE
- COLUMN/POST

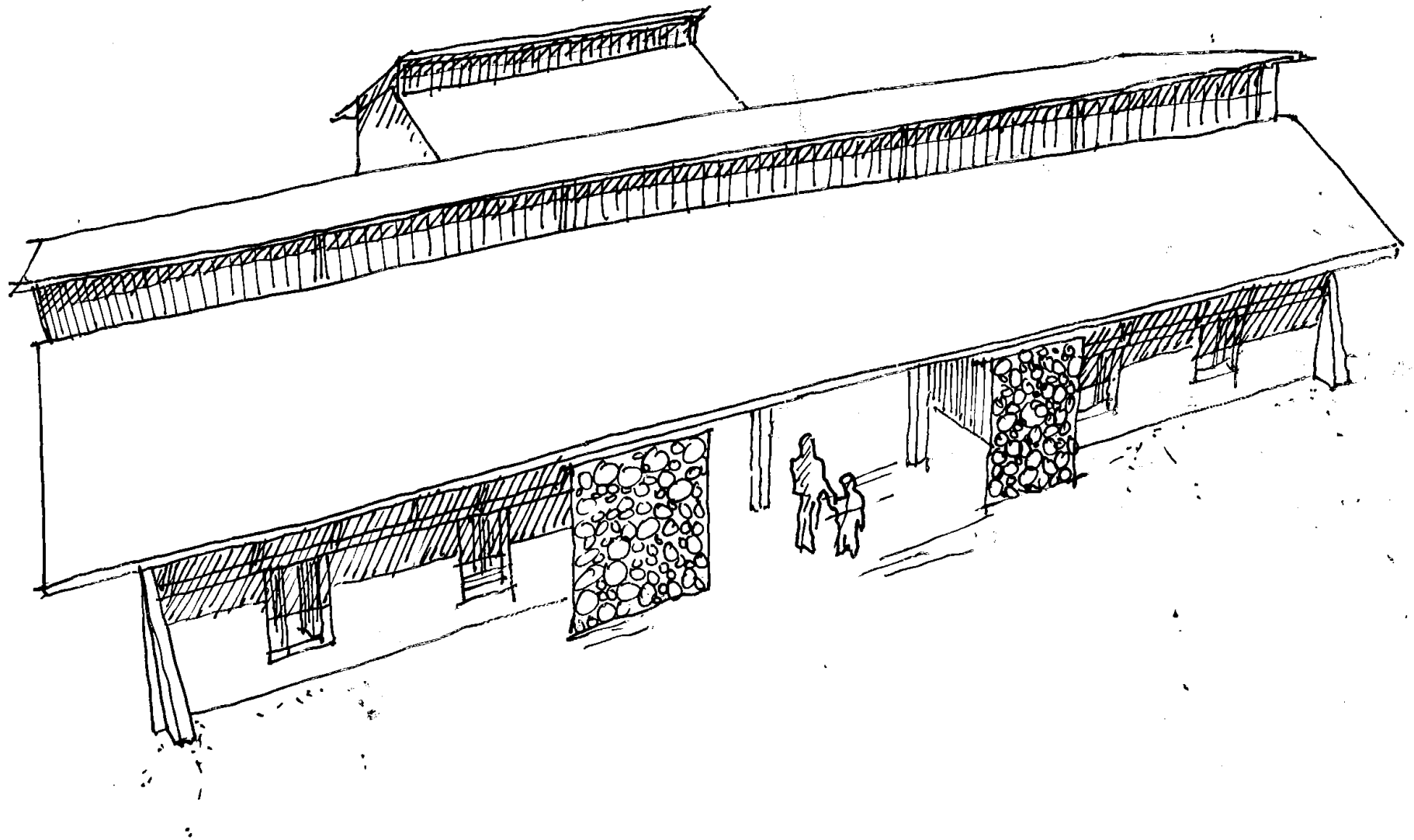
APPROX  
12 no. trusses  
6M spans



ROOF FLOW + FALL  
OPTION 2.

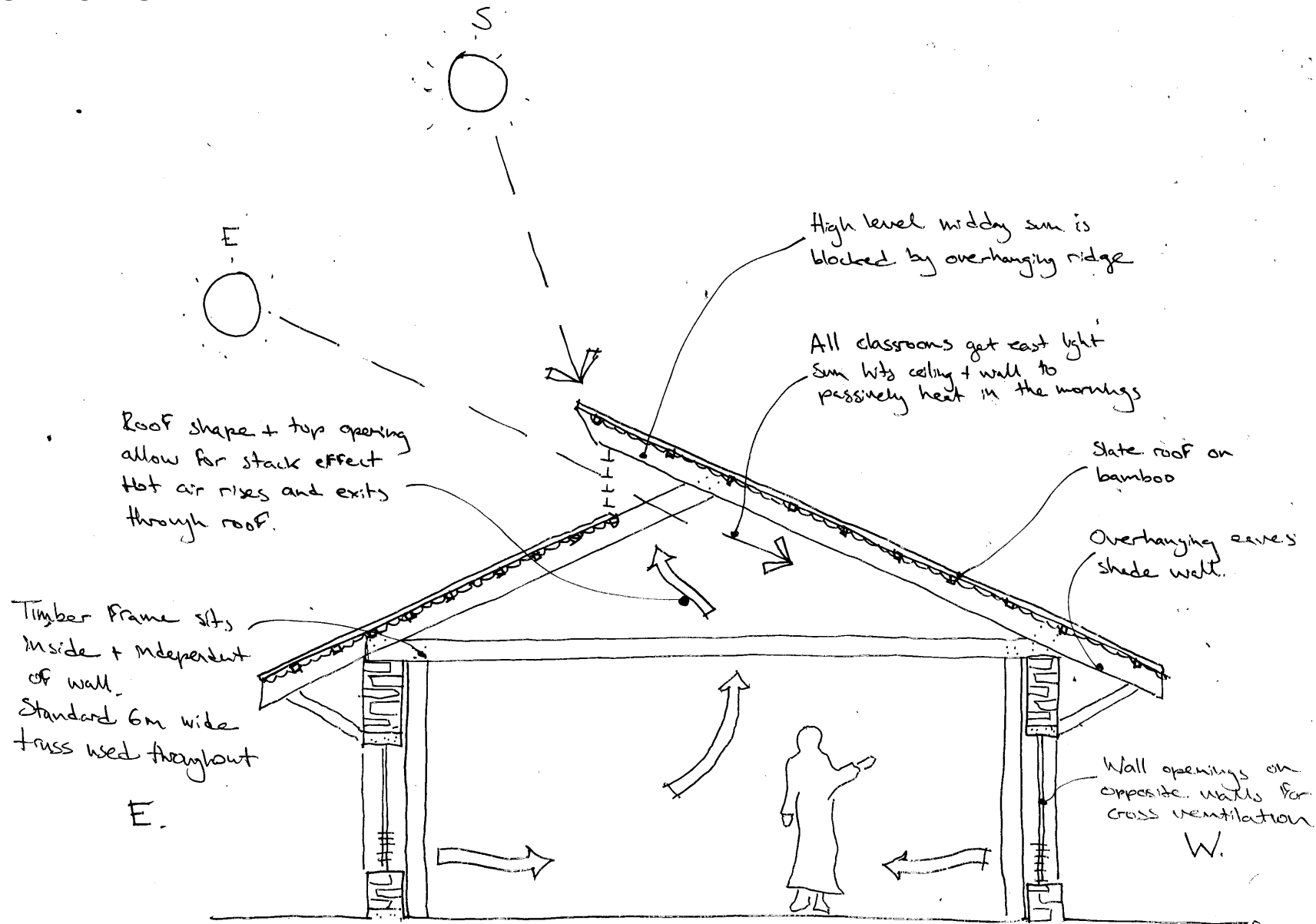


## ROOF SKETCHES



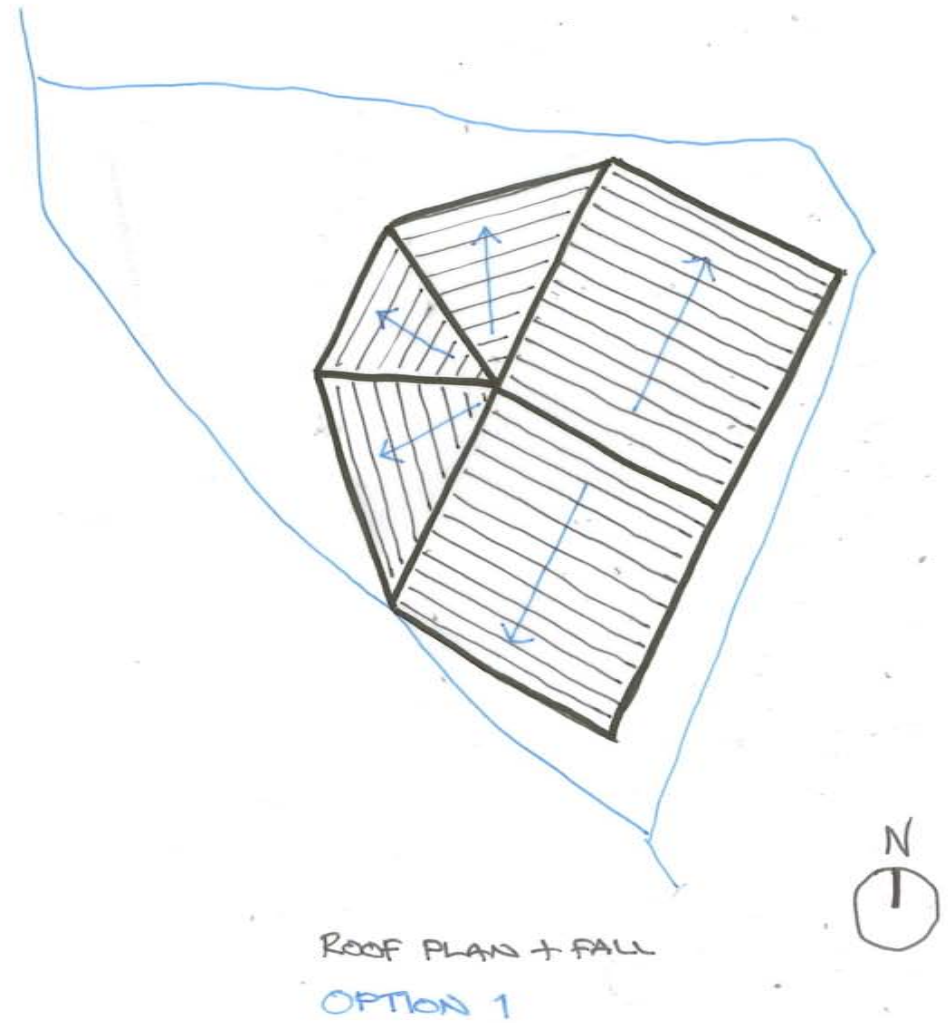
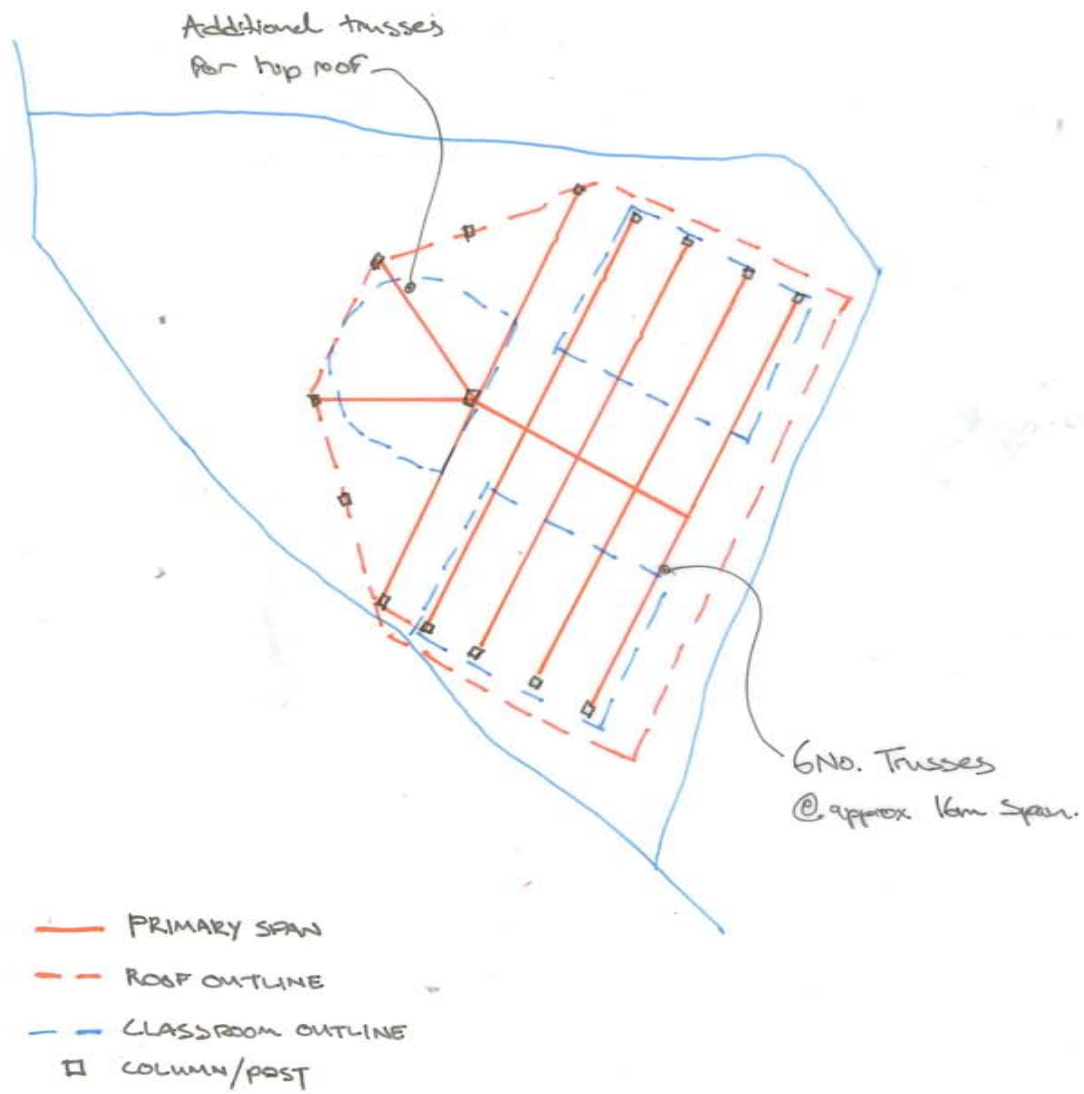


# ROOF SKETCHES



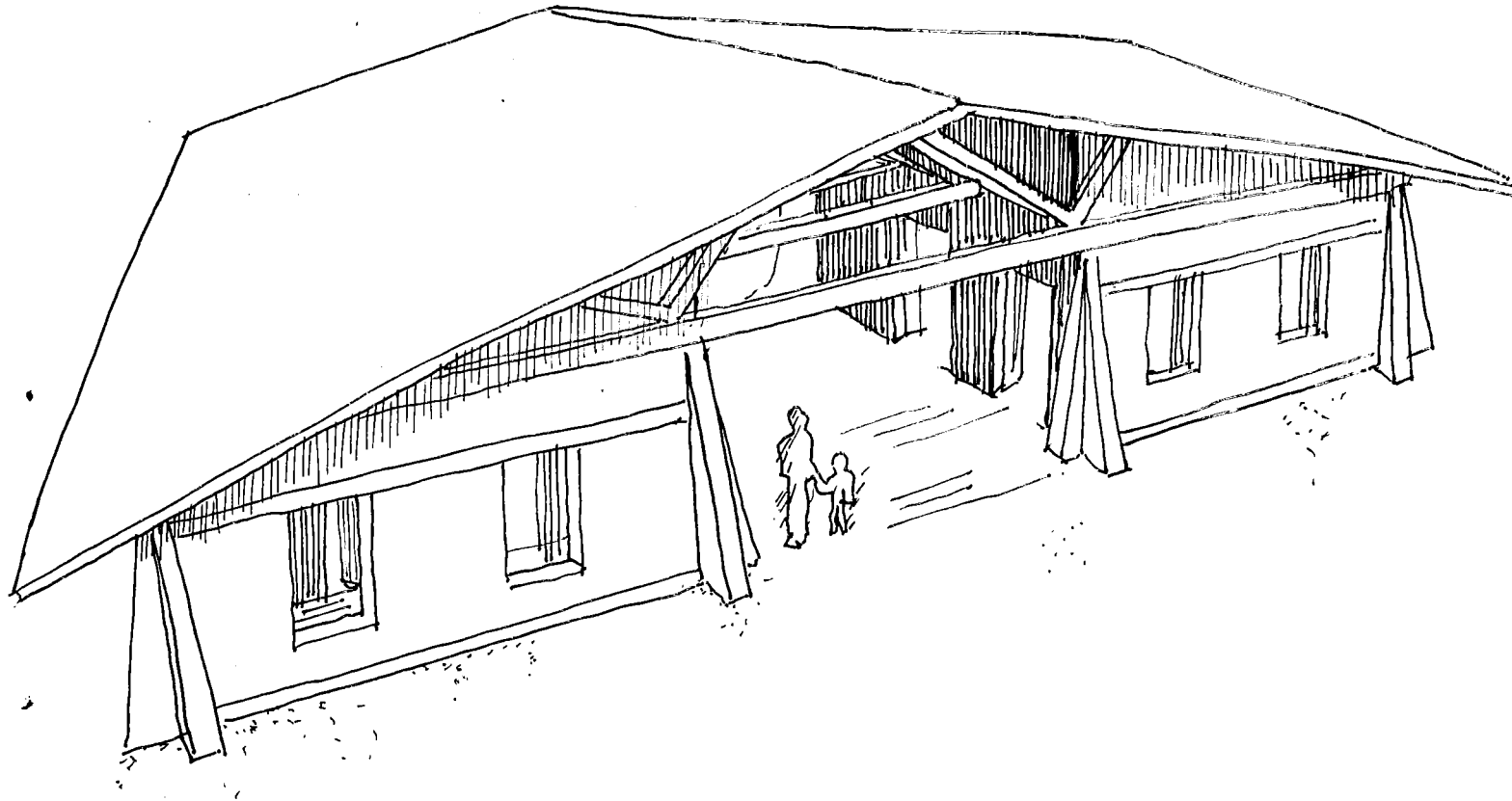
OPT 2. TYPICAL SECTION

# ROOF SKETCHES





## ROOF SKETCHES



OPT 1

VIEW FROM SOUTHEAST

# INTERIOR & MATERIALS

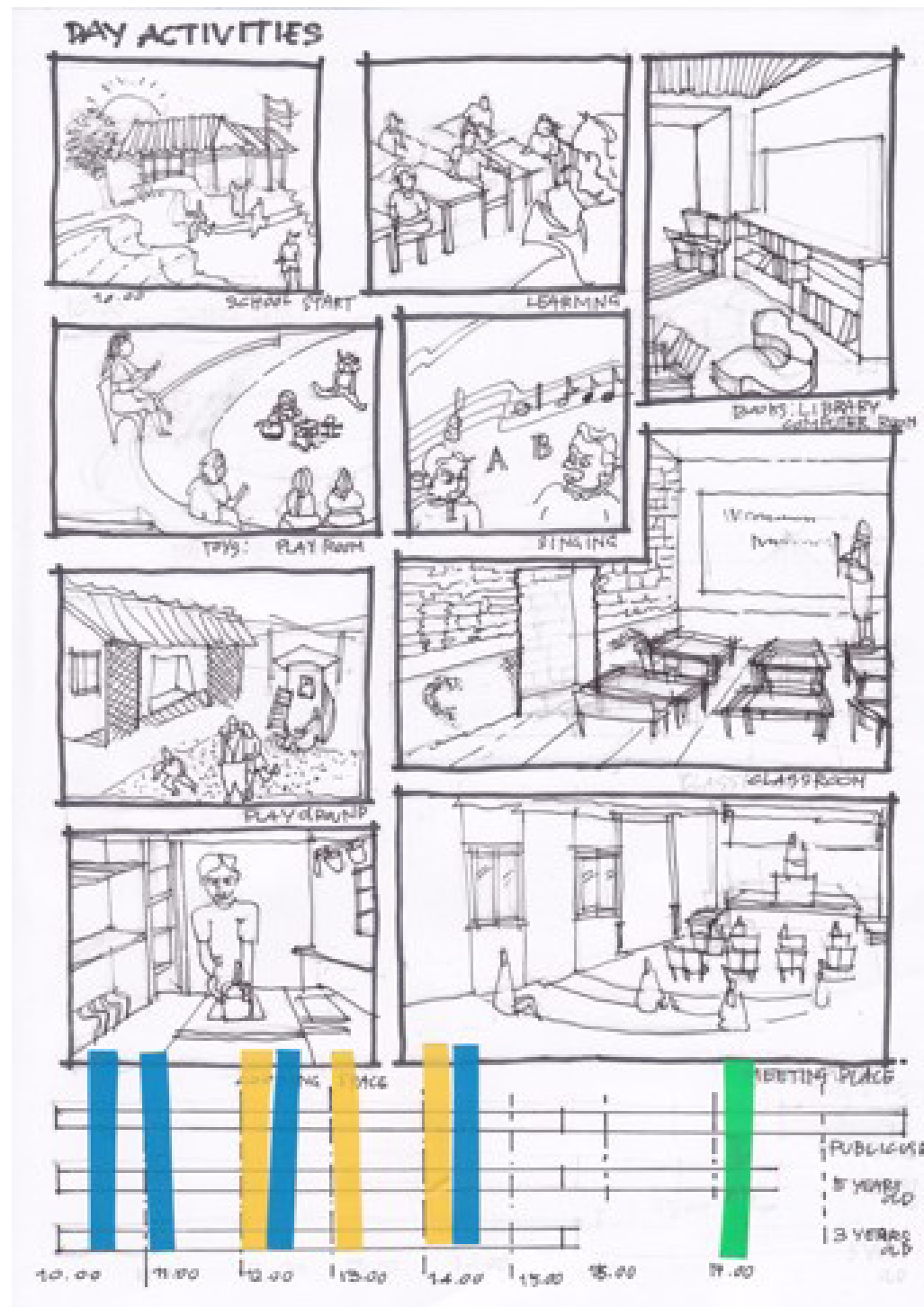
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BALMITAR  
NEPAL





# STORYBOARD

- Students' daily life
- What do they do everyday?



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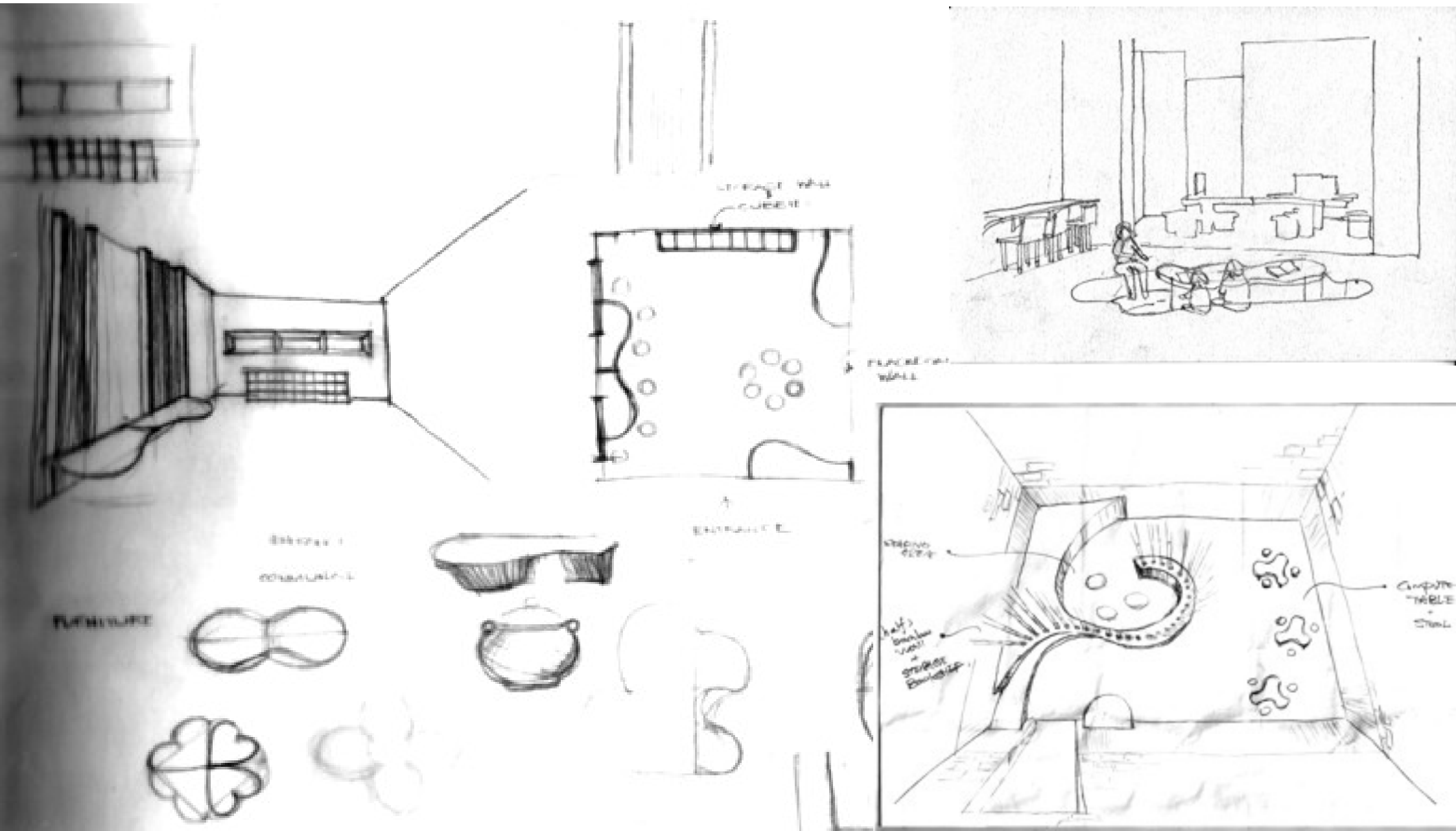
## CONCEPT

- Rice terrace
- Colours
- Natural lighting



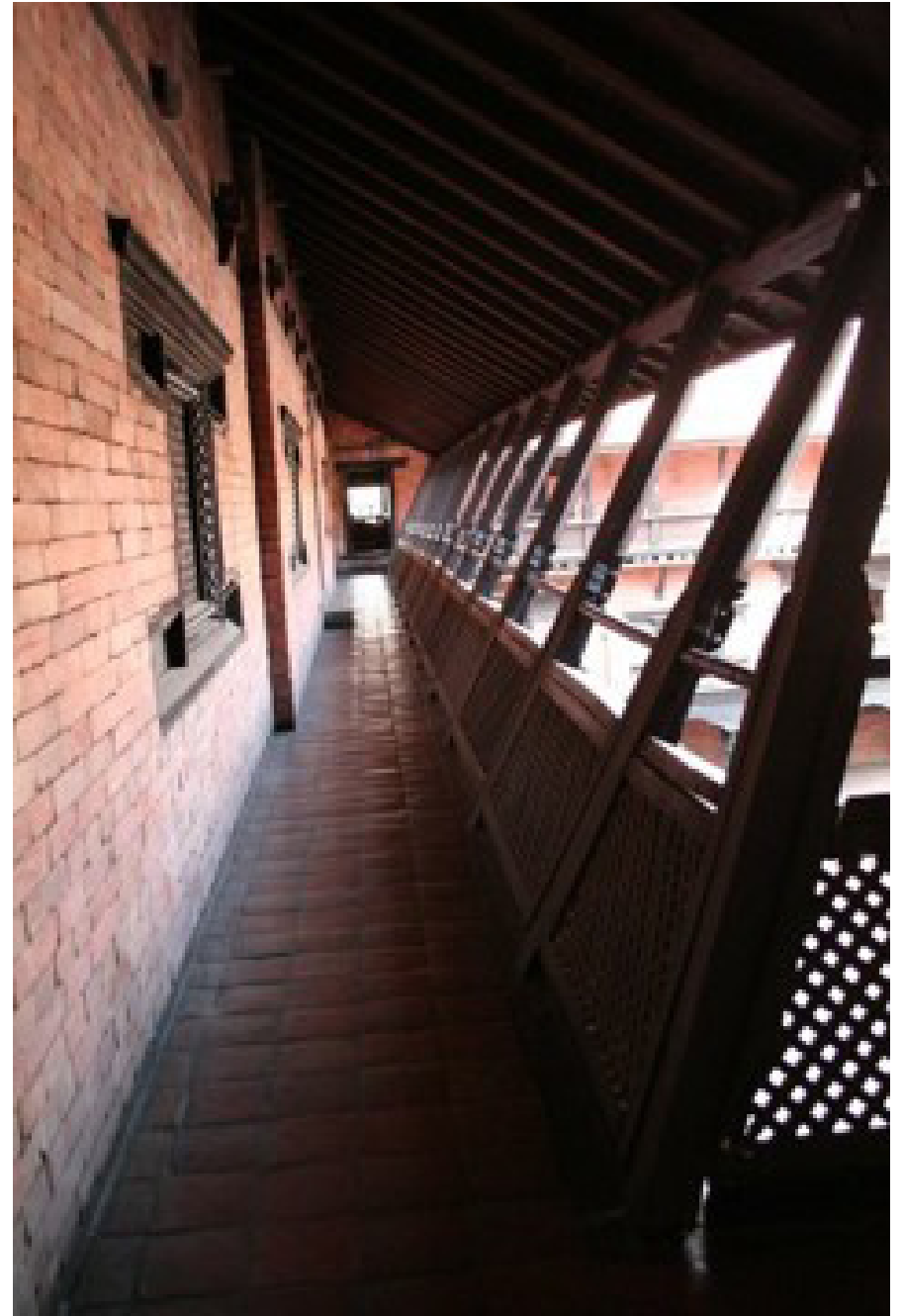


# SPATIAL STUDIES



## MATERIALS

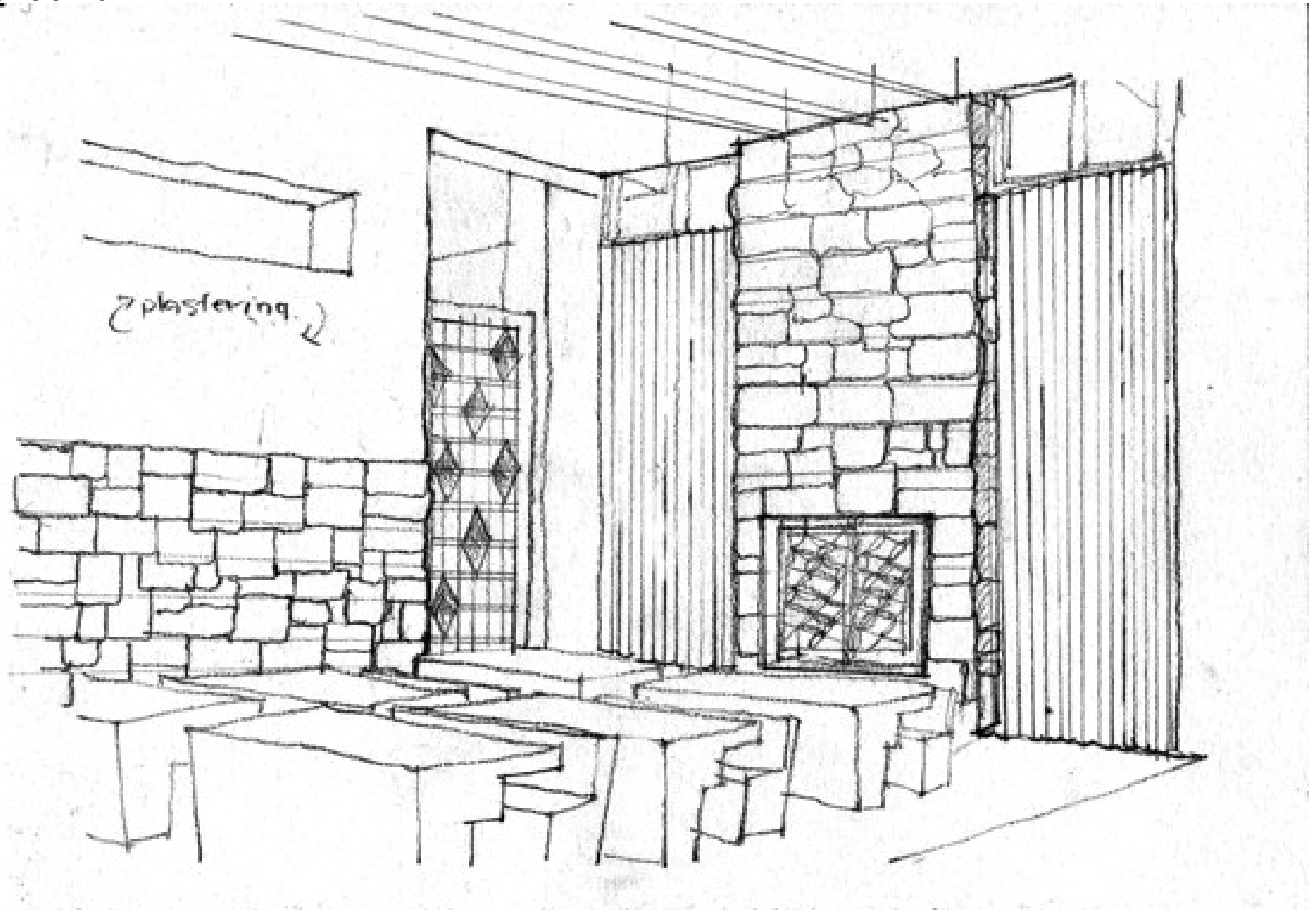
- Weaving
- Timber
- Brick
- Stone



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## CLASSROOM 01



## CLASSROOM 02





## CLASSROOM 03

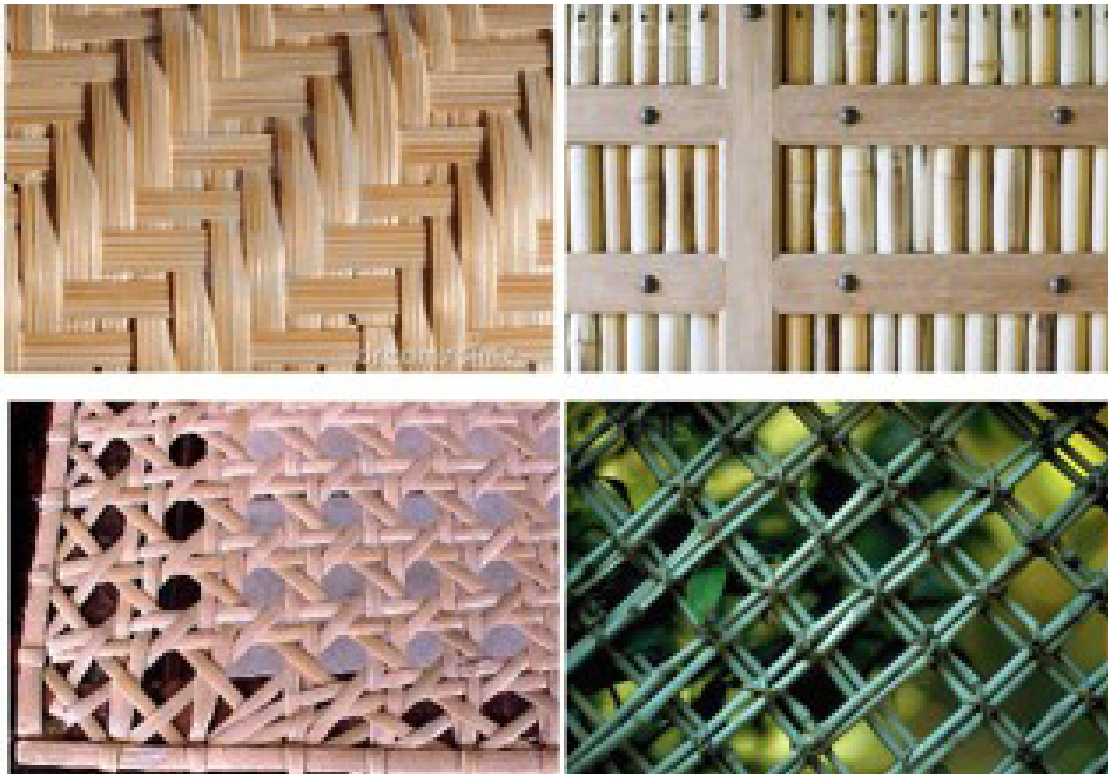


## BAMBOO RESEARCH

- Giant, fast-growing grasses that have woody stems.
- Bamboo are distributed in tropical and subtropical to mild temperate regions.
- With the heaviest concentration and largest number of species in East and Southeast Asia and on islands of the Indian and Pacific oceans.
- Bamboo culms can attain heights ranging from 10 to 15 cm (about 4 to 6 inches) in the smallest species to more than 40 m (about 130 feet) in the largest.
- The largest bamboo stems supply planks for houses and rafts, while both large and small stems are lashed together to form the scaffoldings used on building-construction sites.
- Also used to make furniture.
- Some species of bamboo are used as ornamentals in landscape gardens.



## BAMBOO RESEARCH



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