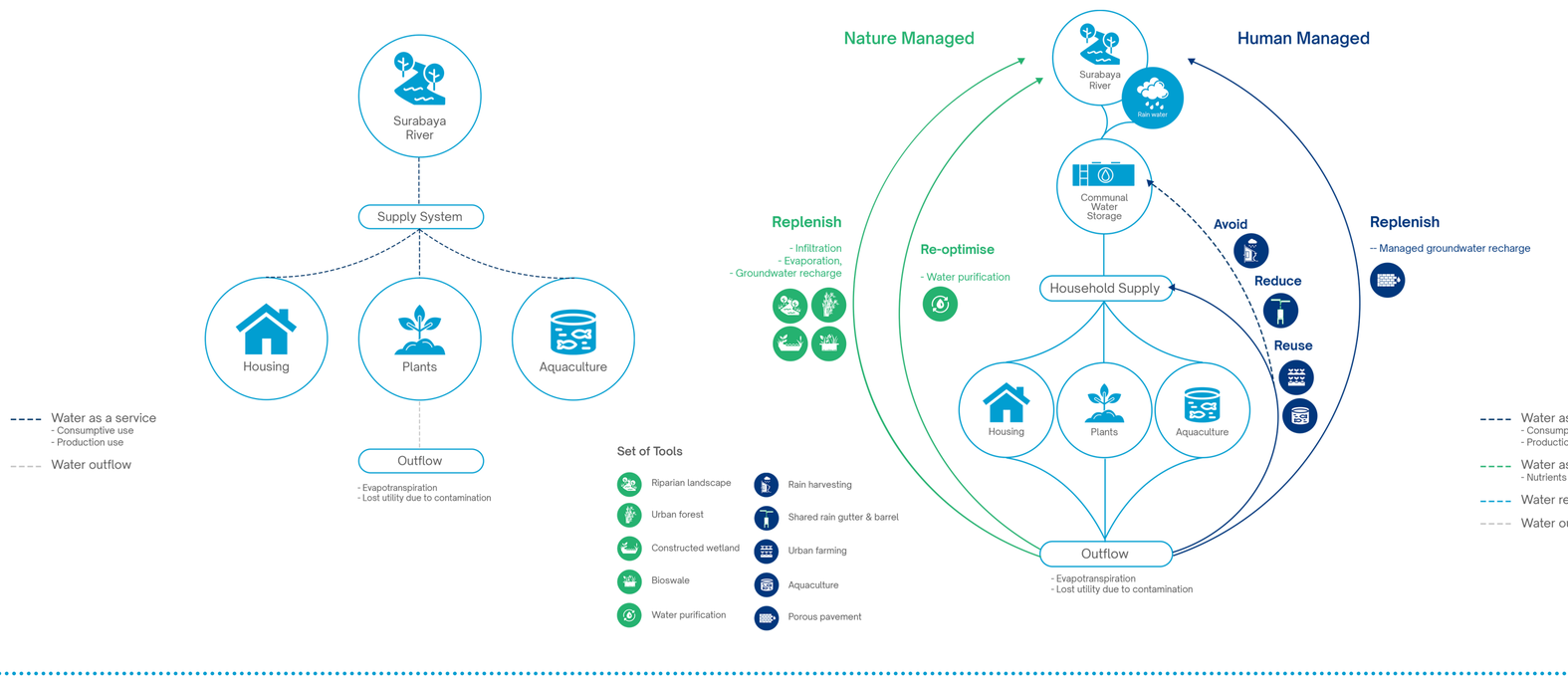
Aprisia Rasya Murran 5794781 | Architectural Engineering Studio

Recovering *the Water*

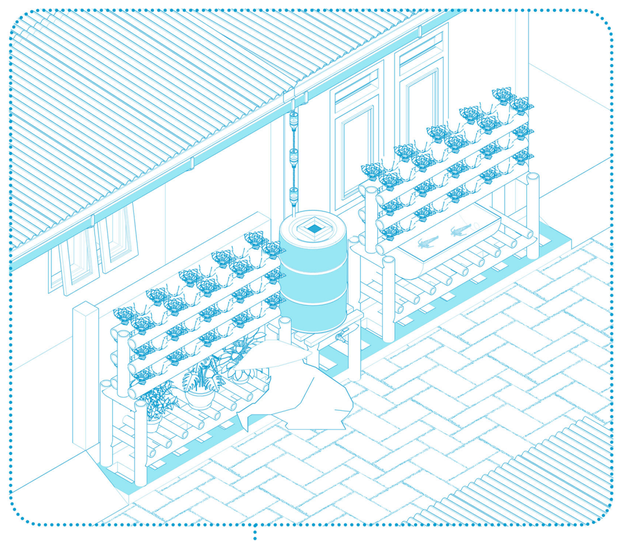
Enhancing the health and wellbeing of Indonesia's kampung system while contributing to the recovery of water ecosystem services

From *Linear Water System* to *Circular Water*



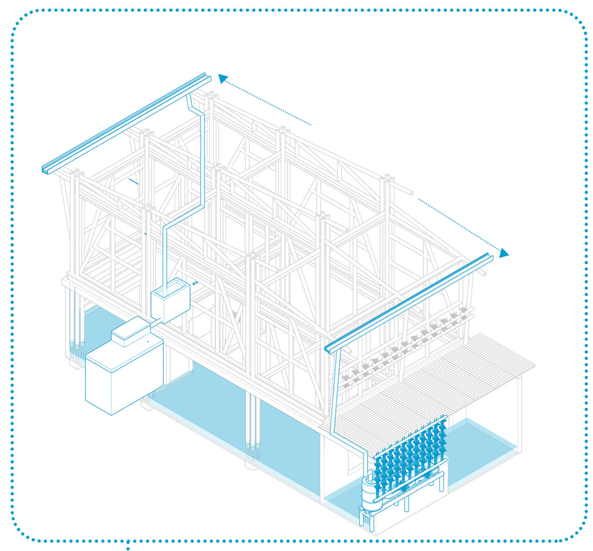
Kampung Street Level

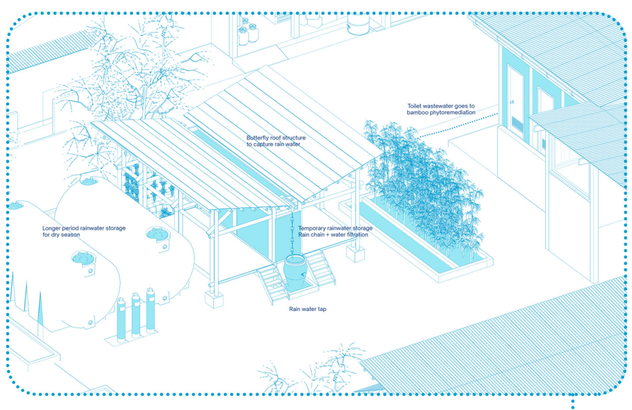
Shared rain gutter & rain barrel
Urban food farming
- Hydroponics
- Aquaponics
Covered local drainage
Porous pavement



Household Level

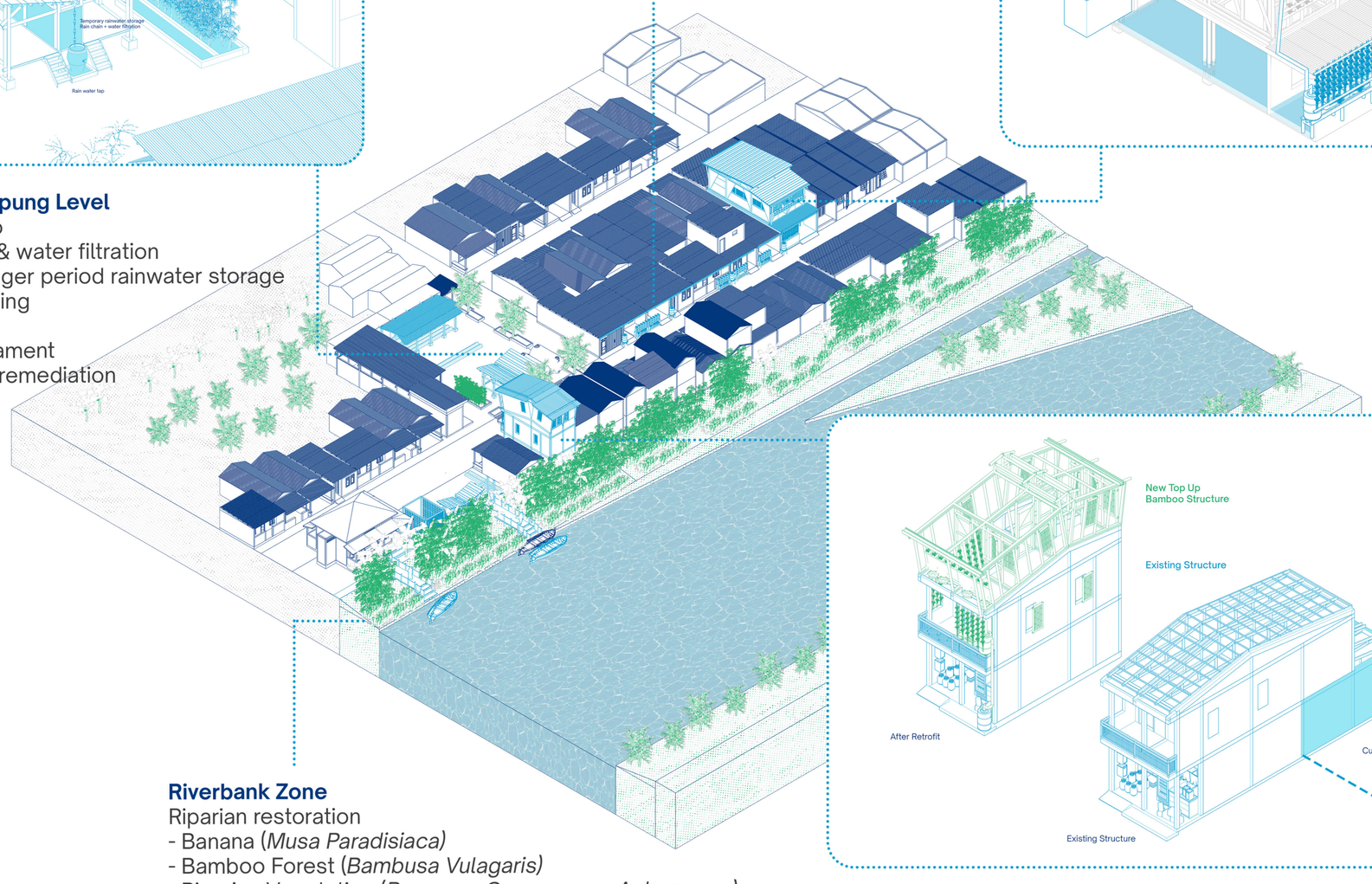
Rain harvesting & water filtration
Bamboo flood structure
Urban food farming
- Hydroponics
- Aquaponics





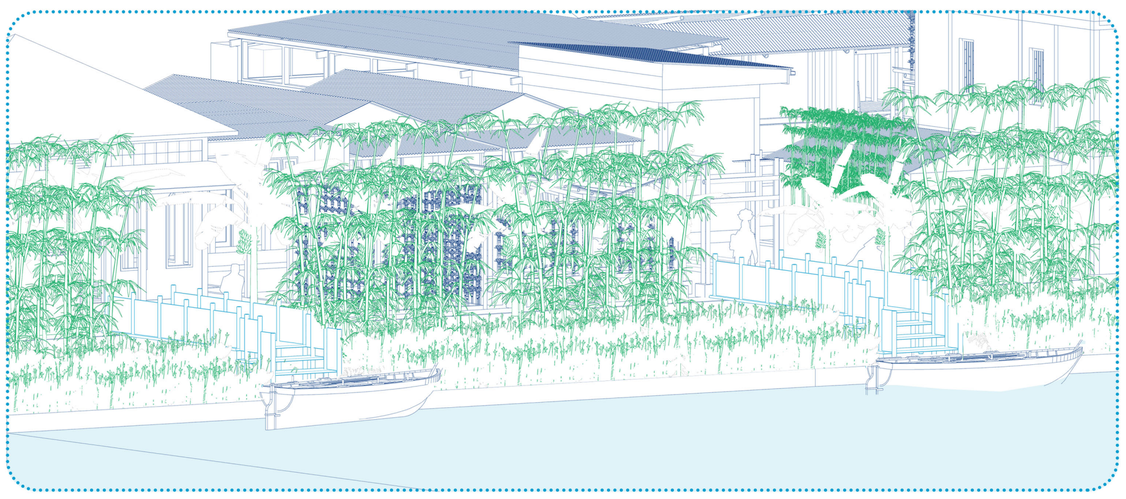
Communal Kampung Level

Bamboo gazebo
Rain harvesting & water filtration
Temporary & longer period rainwater storage
Urban food farming
- Aquaponics
Wastewater treament
- Bamboo phytoremediation



Riverbank Zone

Riparian restoration
- Banana (*Musa Paradisiaca)*
- Bamboo Forest (*Bambusa Vulagaris)*
- Riparian Vegetation (*Poaceae, Cyperaceae, Asteraceae)*
Bamboo walk for fishing boat

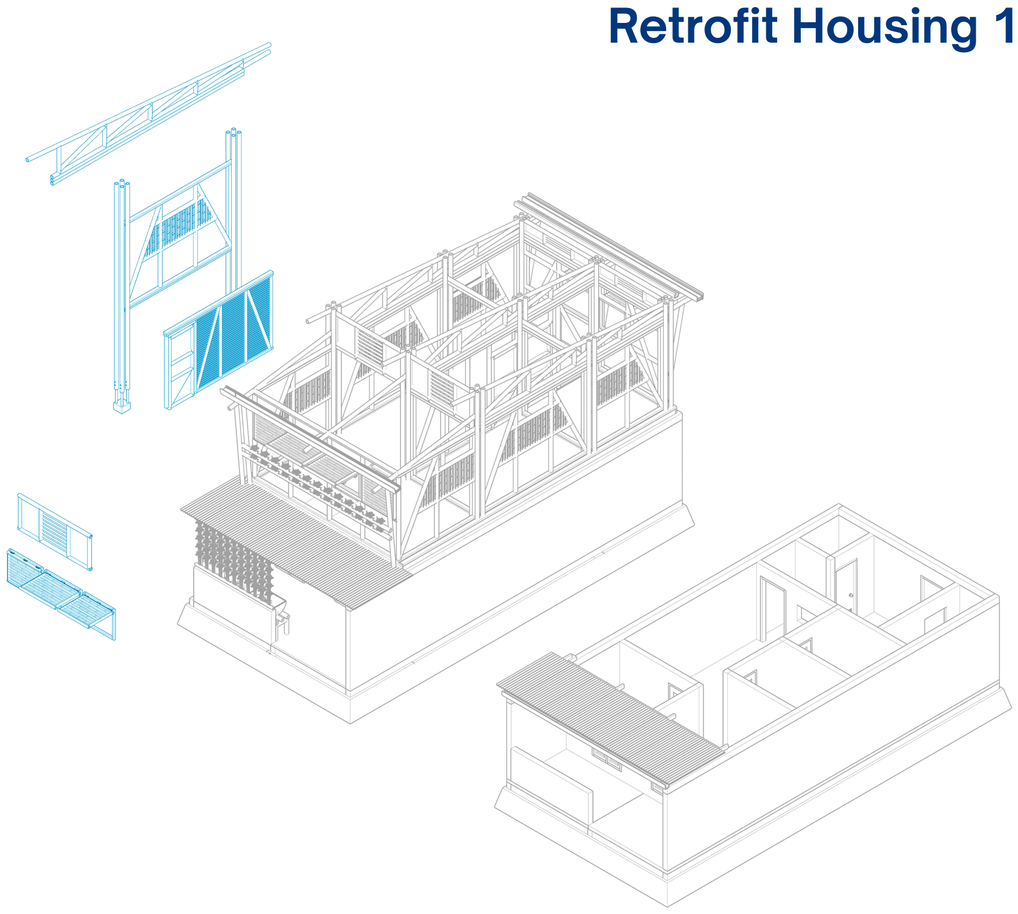


Household Level

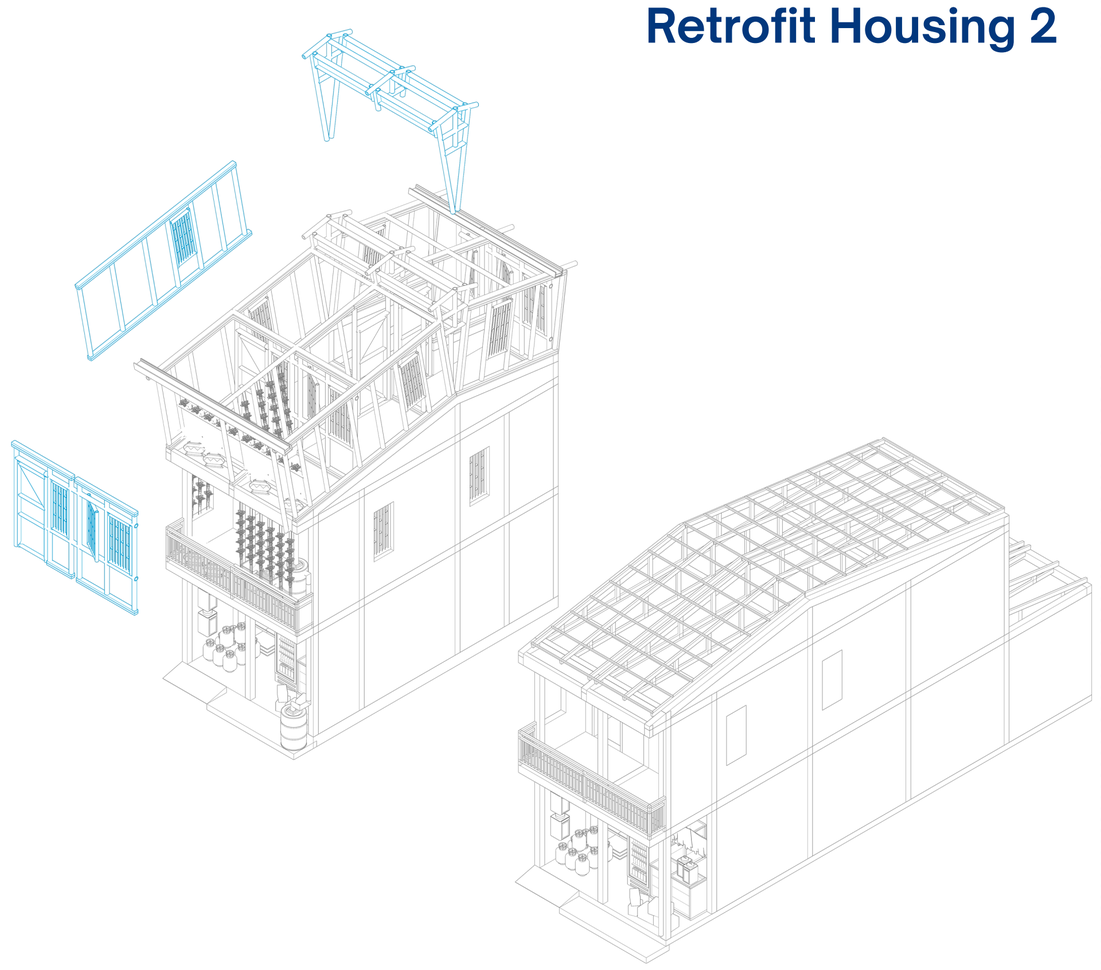
Rain harvesting & water filtration
Bamboo top up structure
Reuse of existing structure
Urban food farming
- Hydroponics
- Aquaponics

TU Delft

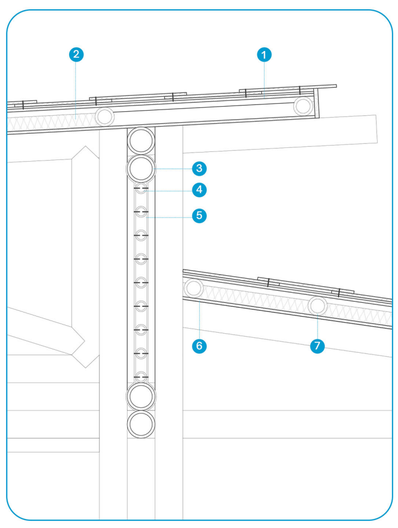
Retrofit Housing 1



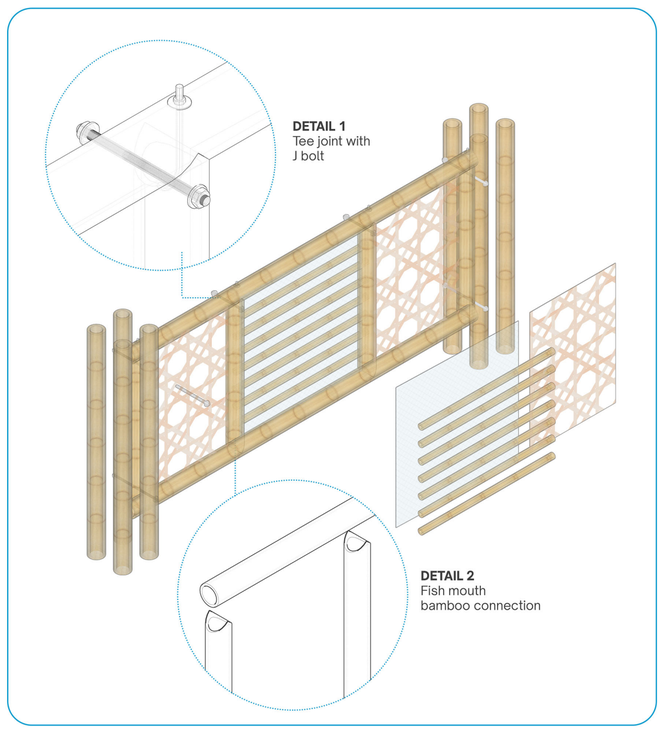
Retrofit Housing 2



Louvre Detail
1:10

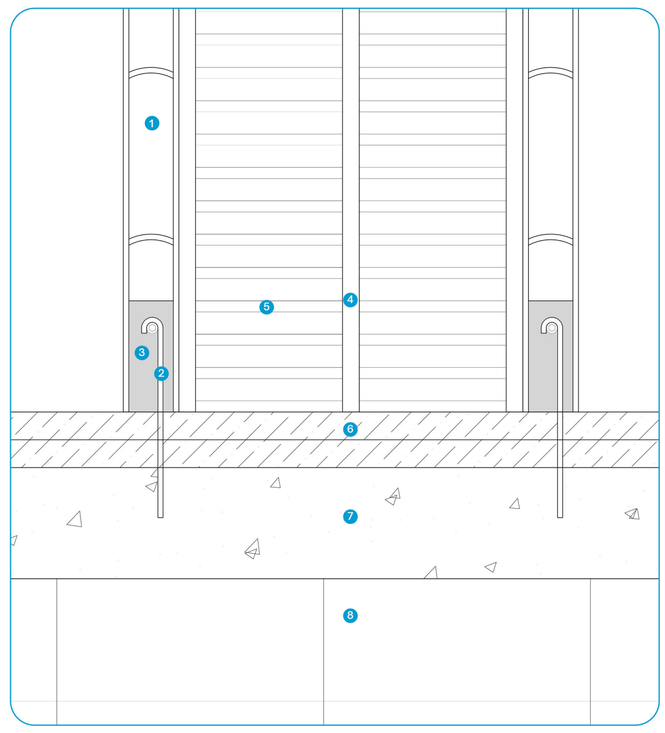


1 Bamboo *Pelupuh* roof cover
Waterproof membrane layer
Bamboo woven
2 Banana fiber insulation panel
3 Bamboo pole louvre frame d. 100 mm
4 Bamboo inner louvre d. 40 mm
5 Insect screen net
6 Bamboo woven ceiling
7 Bamboo rafter d. 70 mm

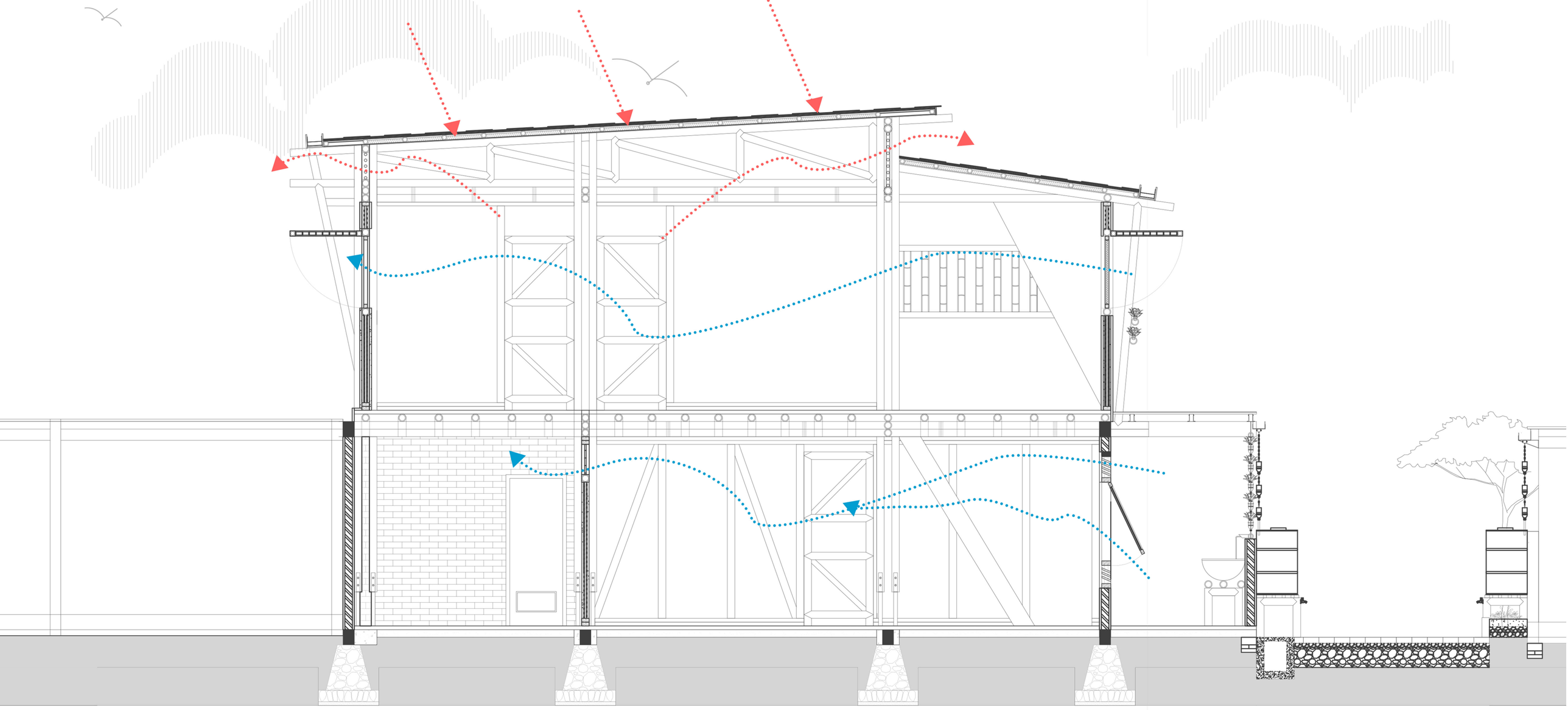


Wall Bamboo and Concrete Block Detail
1:5

1 Bamboo pole column d. 100 mm
2 Steel rod & bolt
3 Mortar filling 200 mm
4 Timber stick/Bamboo d. 30 mm
5 Bamboo slat thickness 10 mm
6 Double timber plate thickness 50 mm
7 Existing concrete beam 150 x 200 mm
8 Concrete block 200 x 600 x 100 mm



The Climate



The Construction