

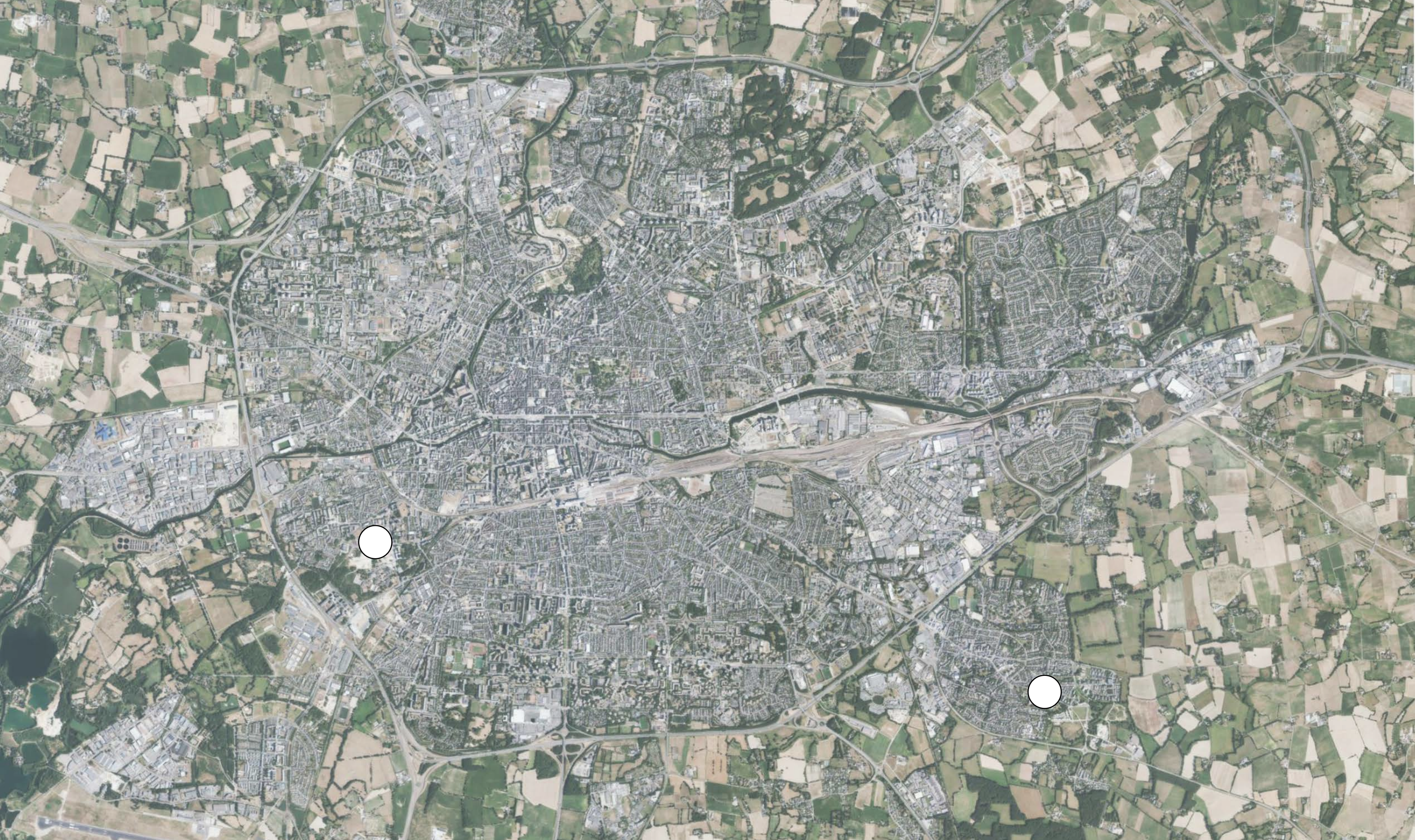
# going solar : two projects in Brittany

5. SYMPOSIUM SOLARES BAUEN 26/09/2023

HADDOCK ARCHITECTURE









# the living warehouse

**Programme** : Transformation of a warehouse into 2 houses

**Architecture design** : Haddock architecture

**Team** : CBTP géotechnique

**Calendar** : Delivery 05/21

**Client** : SCI

**Area** : 191 m<sup>2</sup>

**Cost** : 410 000 euros HT

**Technical Specifications :**

Preserved framework, MOB (*Mur à Ossature Bois* – Timber Frame),

bio-sourced insulation, chestnut cladding

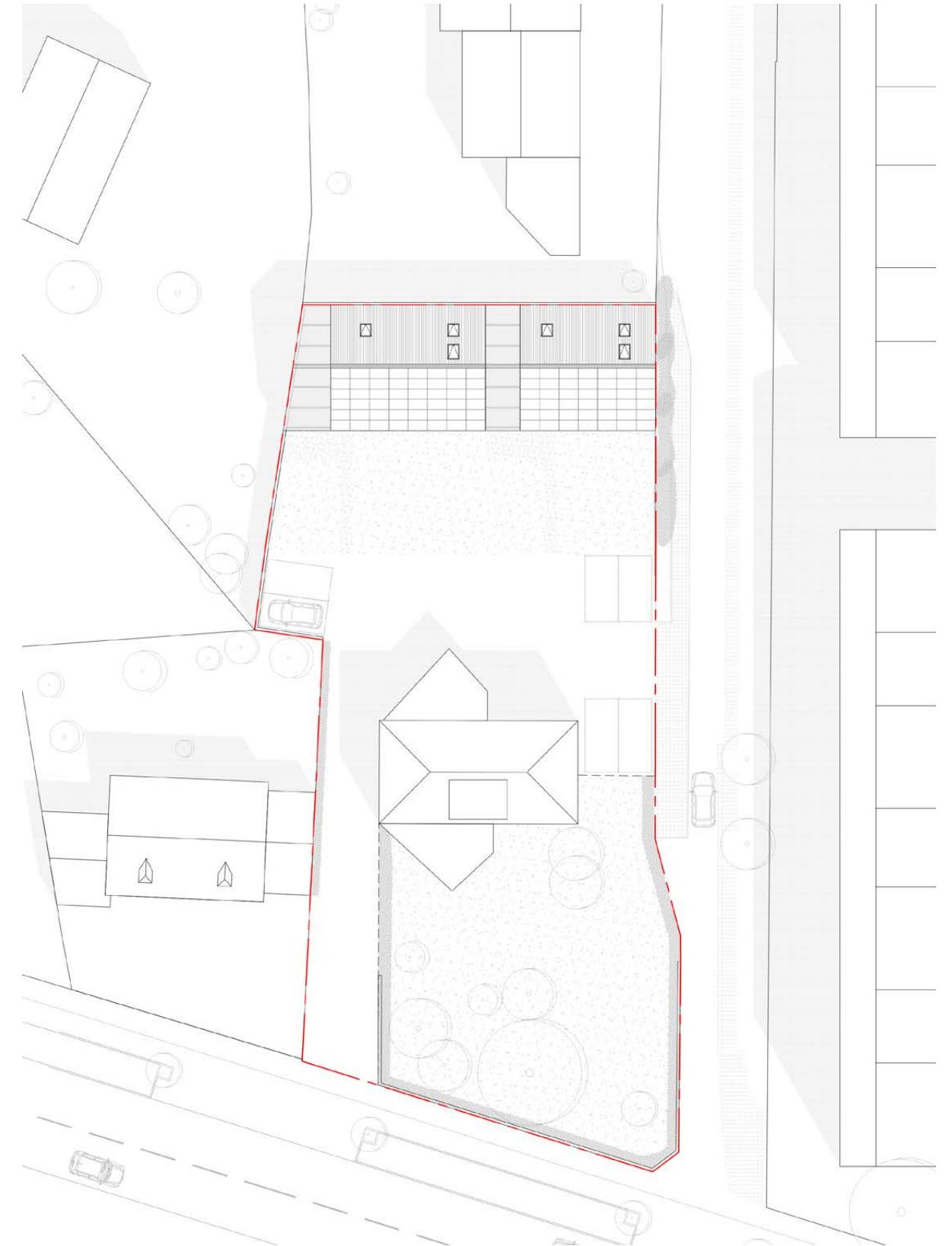
Photovoltaic roof (MegaSlate®), area : 100m<sup>2</sup>, 90 panels, production

11kWc

Rainwater harvesting (1000L)



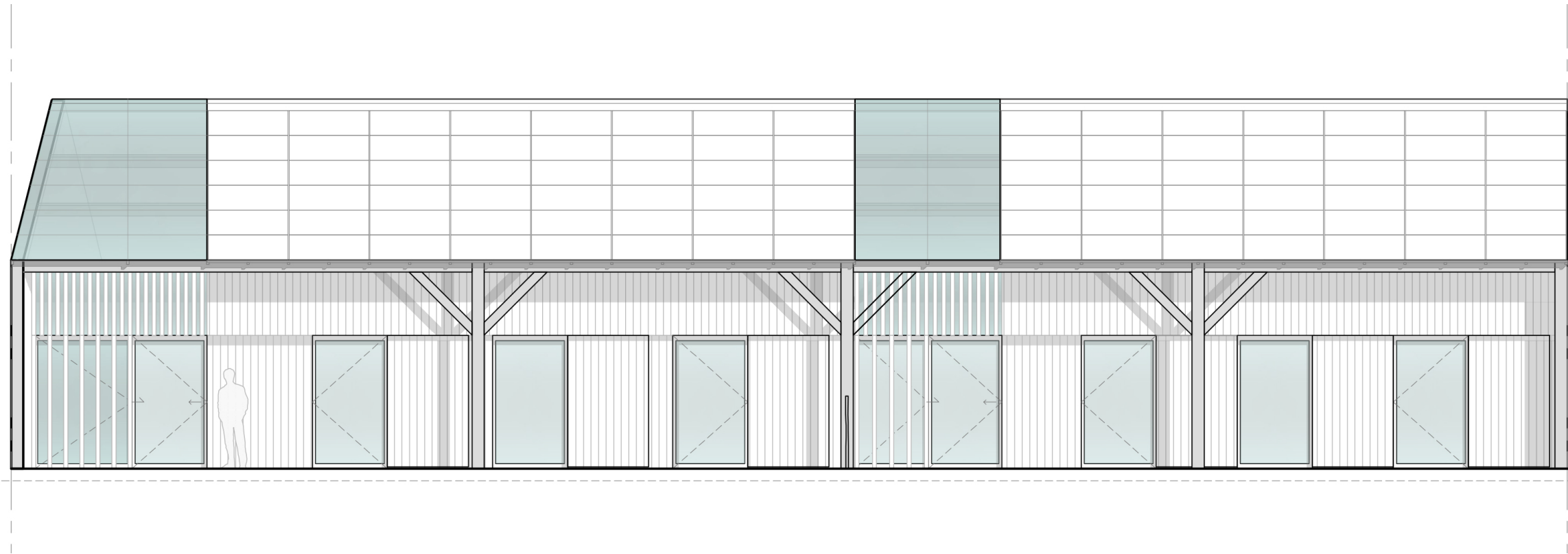
# the living warehouse



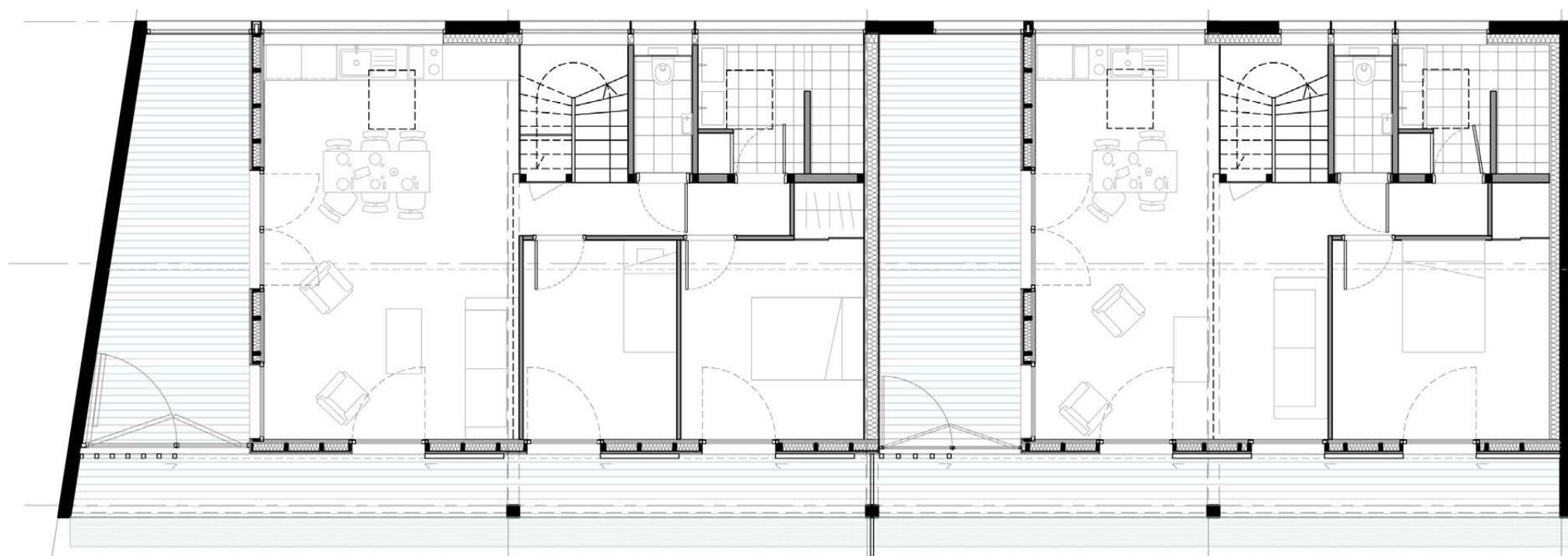
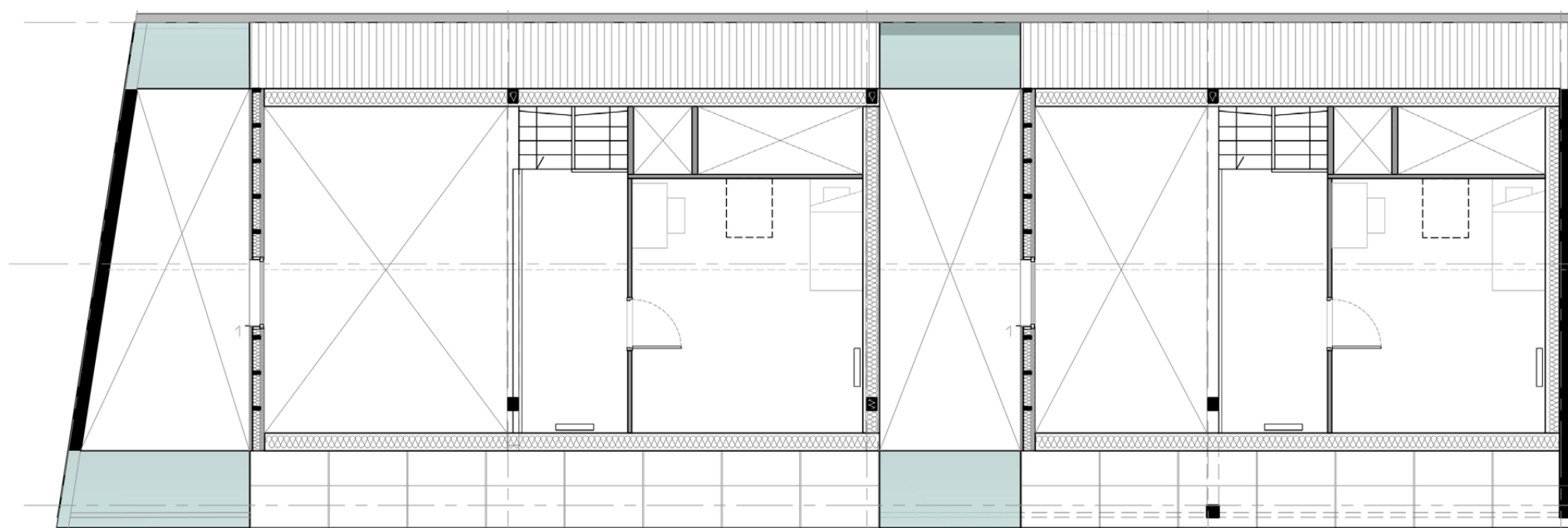




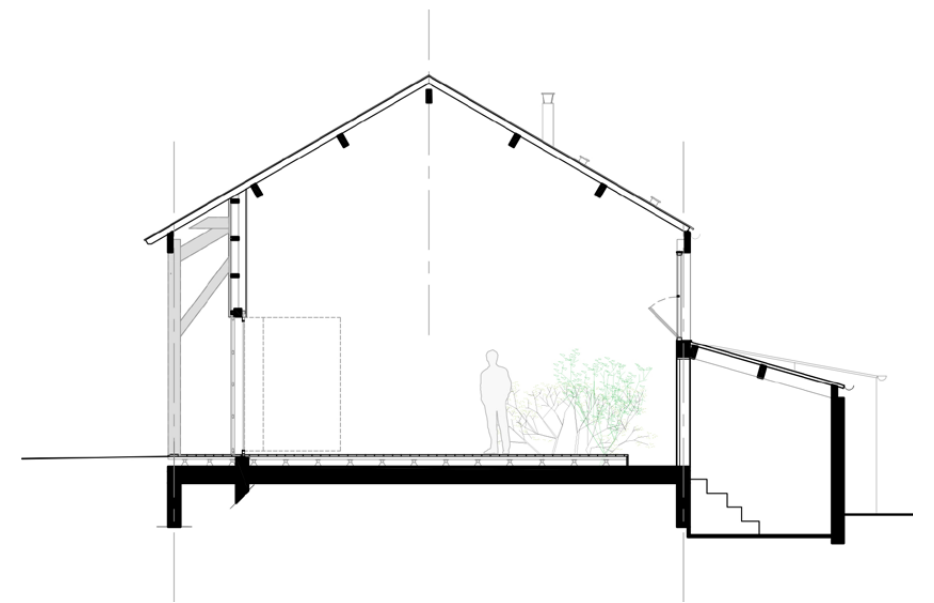




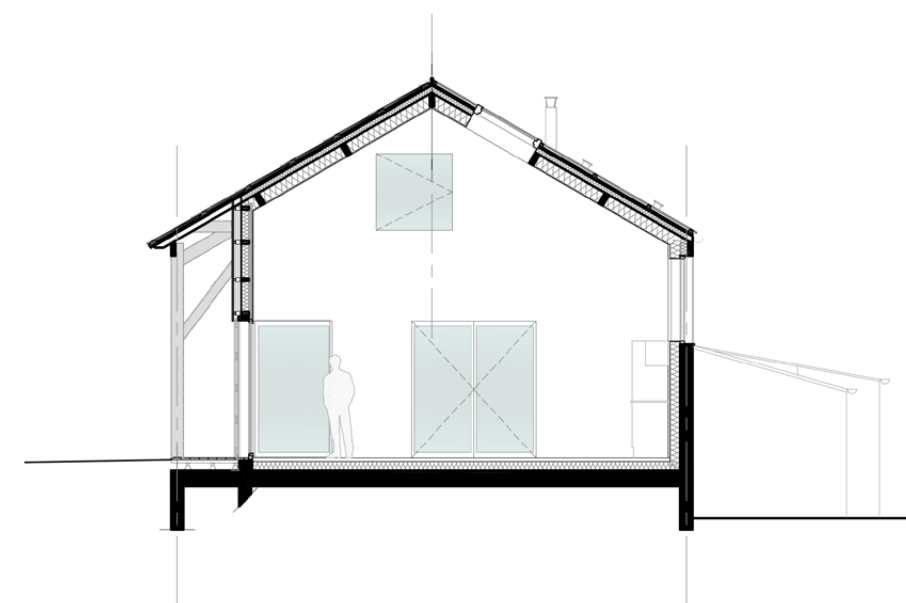
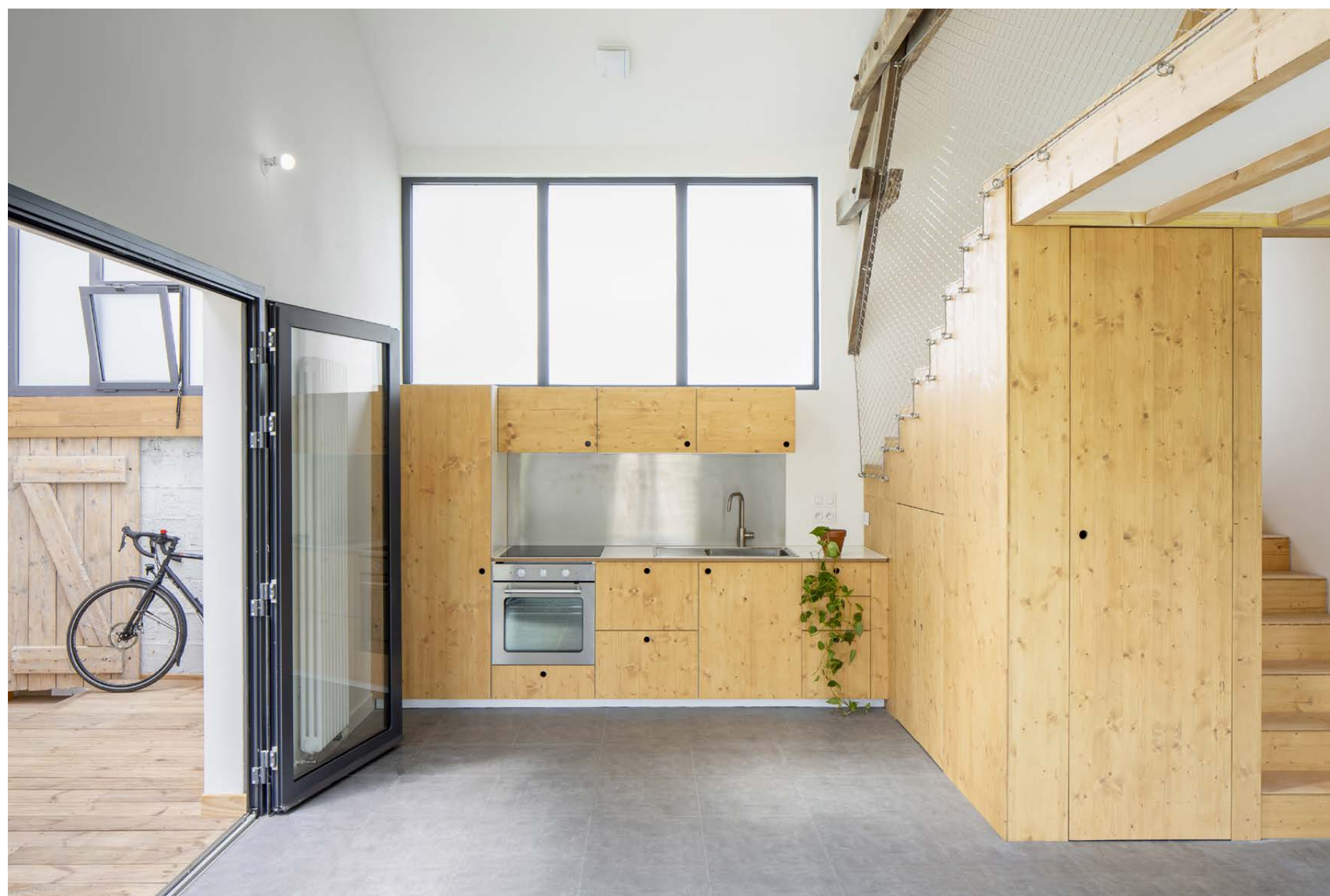




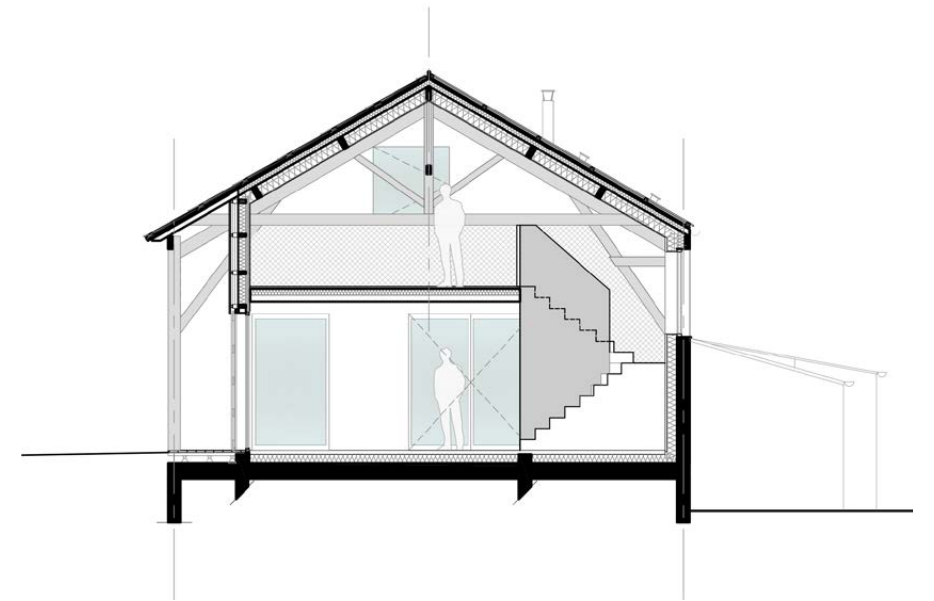




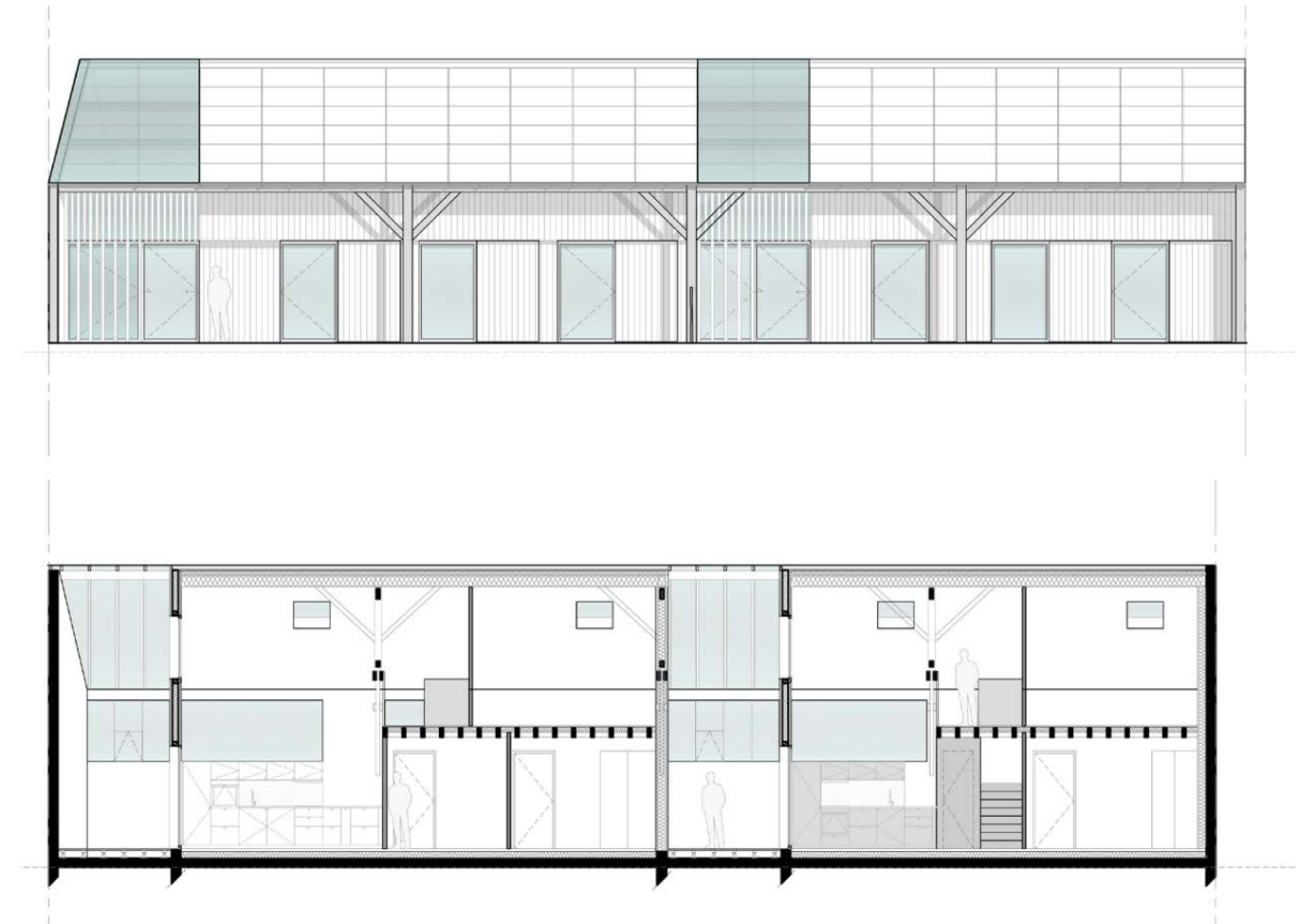








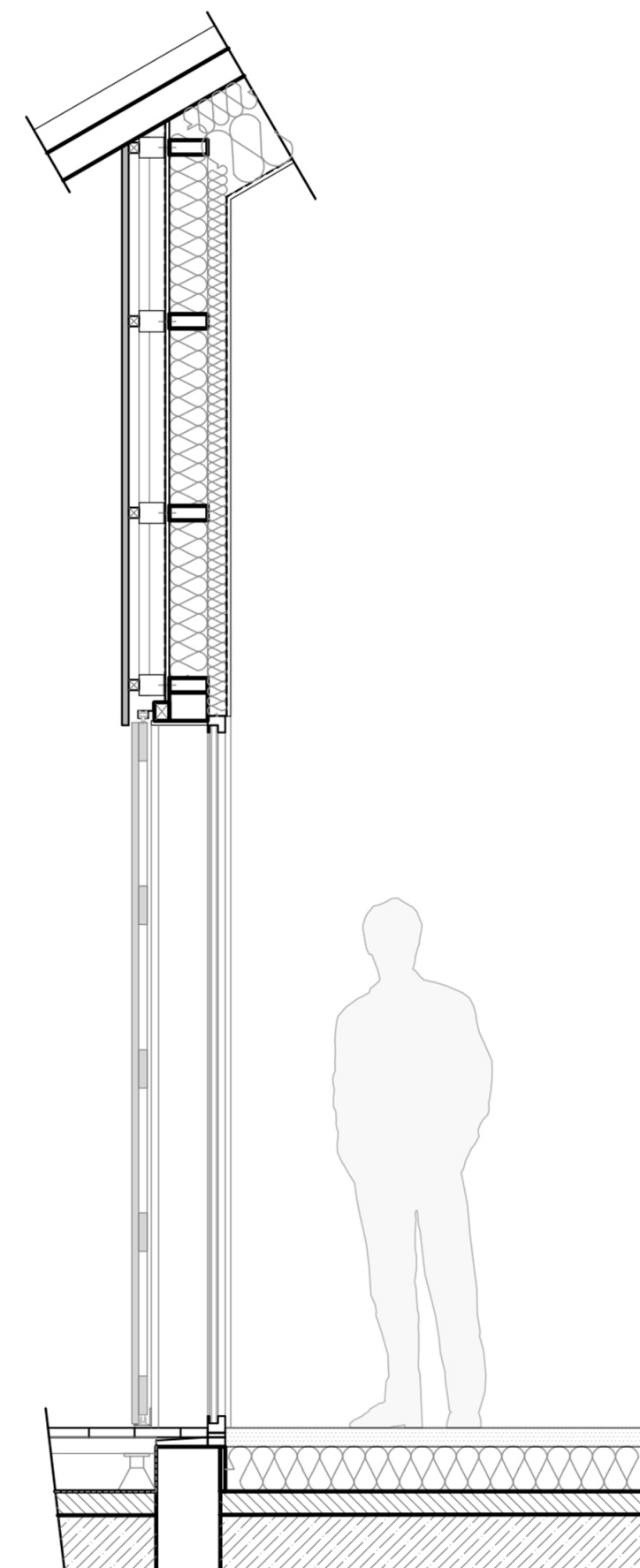




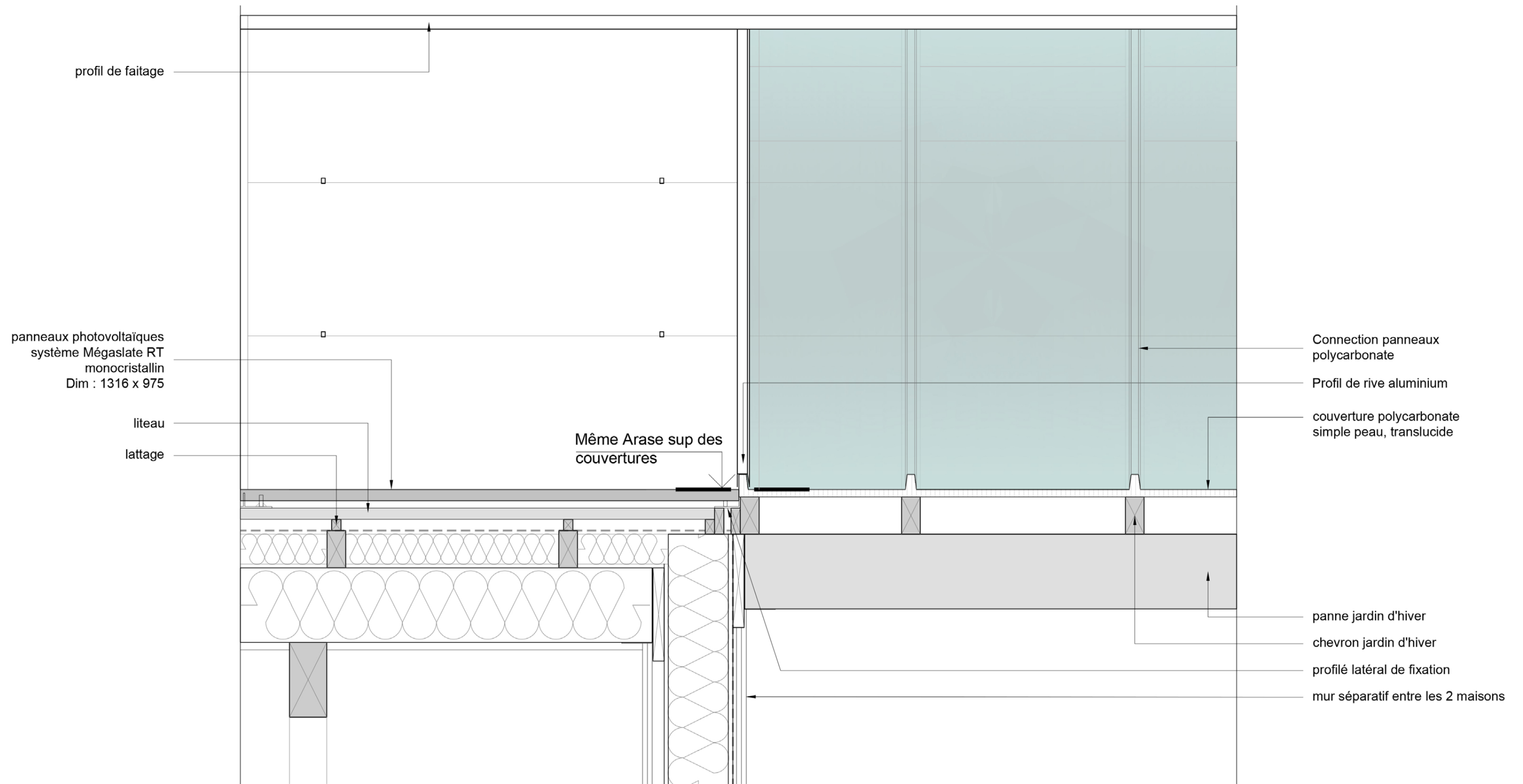




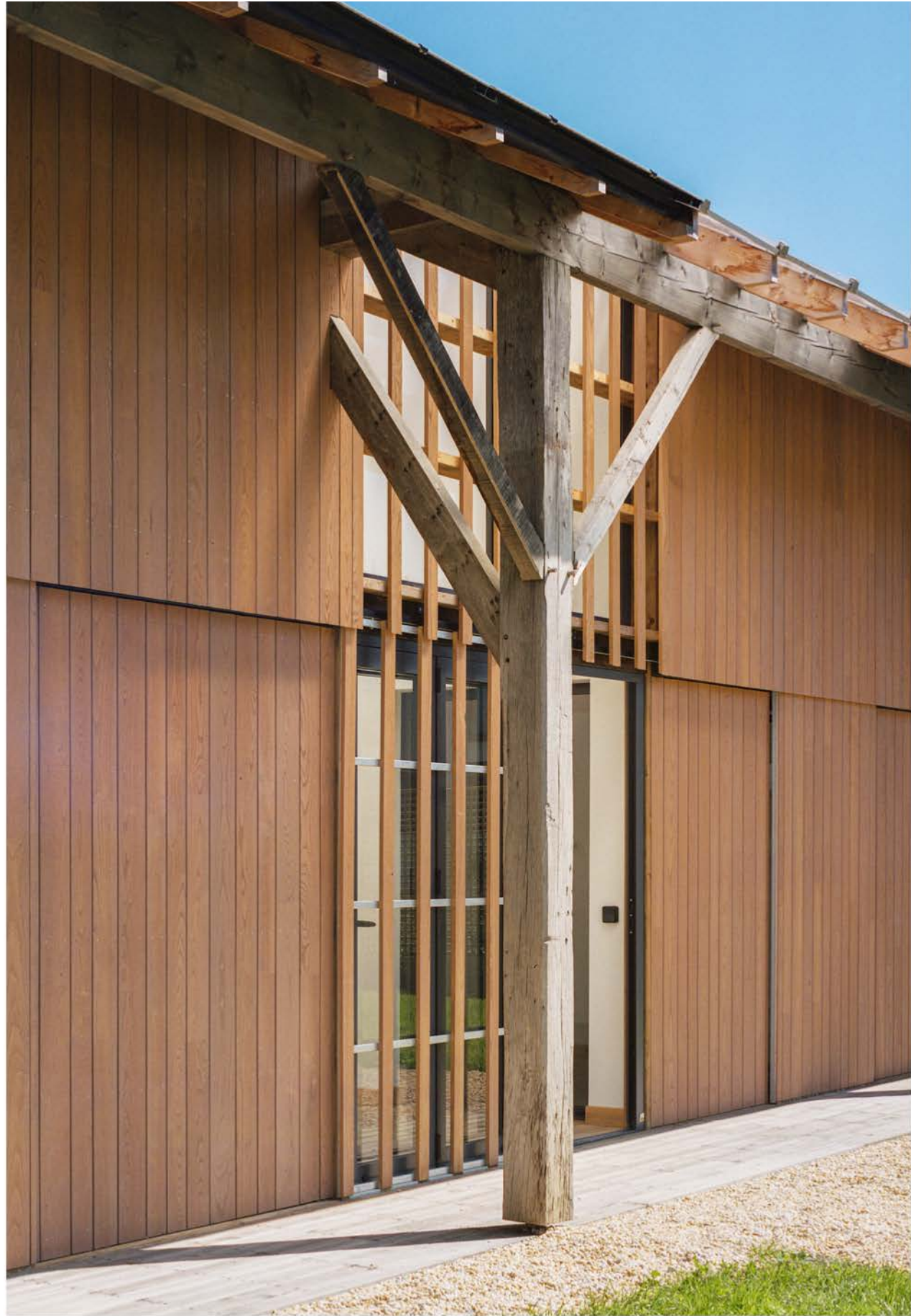




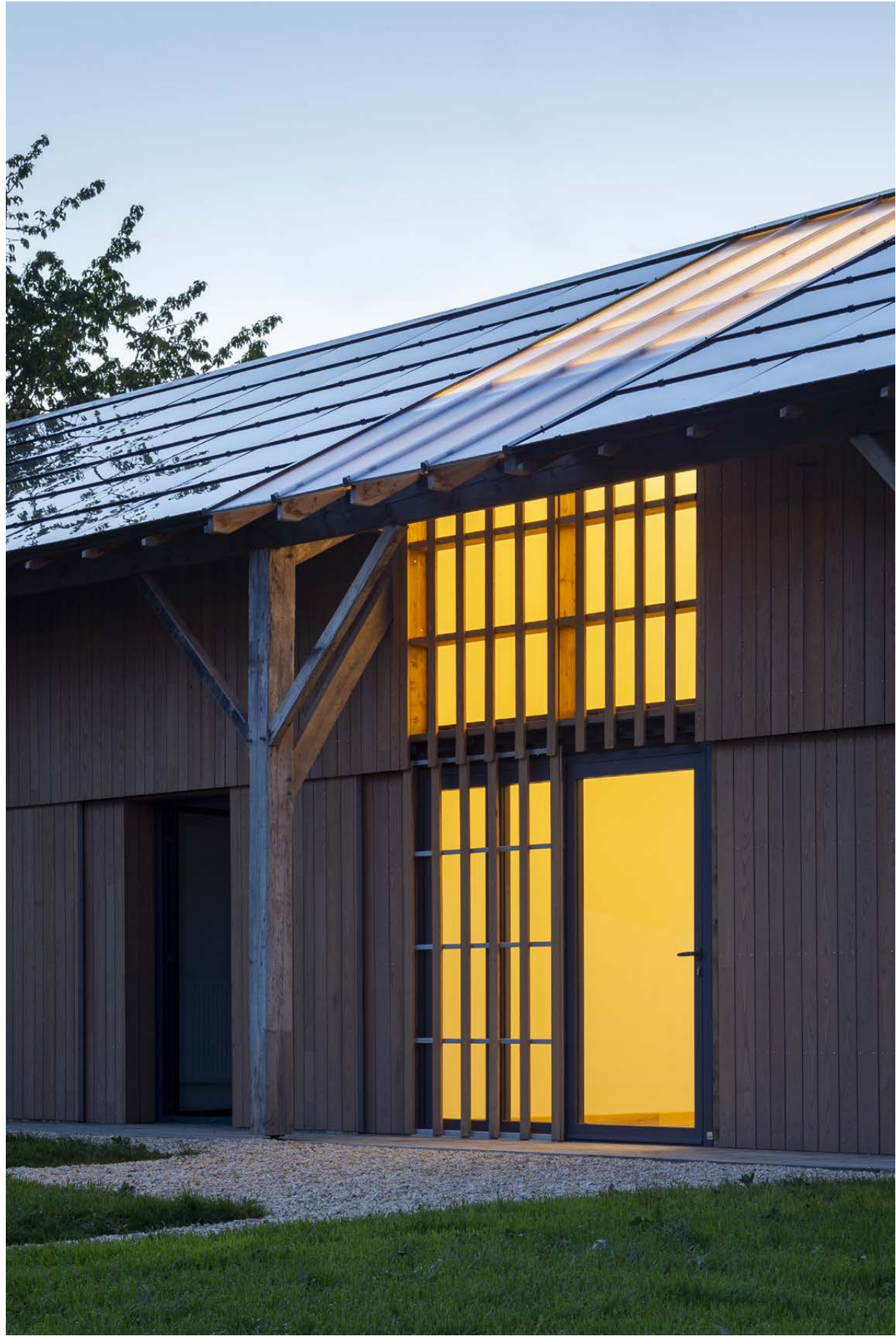






















# an house for gardeners



**Program** : Office, workshops

**Architecture design** : Haddock architecture

**Team** : Bost Ingénierie, Thalem Ingénierie, Cabinet Bagot, Infraconcept, Artémis Ingénieur

**Calendar** : Delivery 07/23

**Client** : City of Rennes

**Area** : 394 m<sup>2</sup>

**Cost** : 879 000 euros HT

**Technical Specifications :**

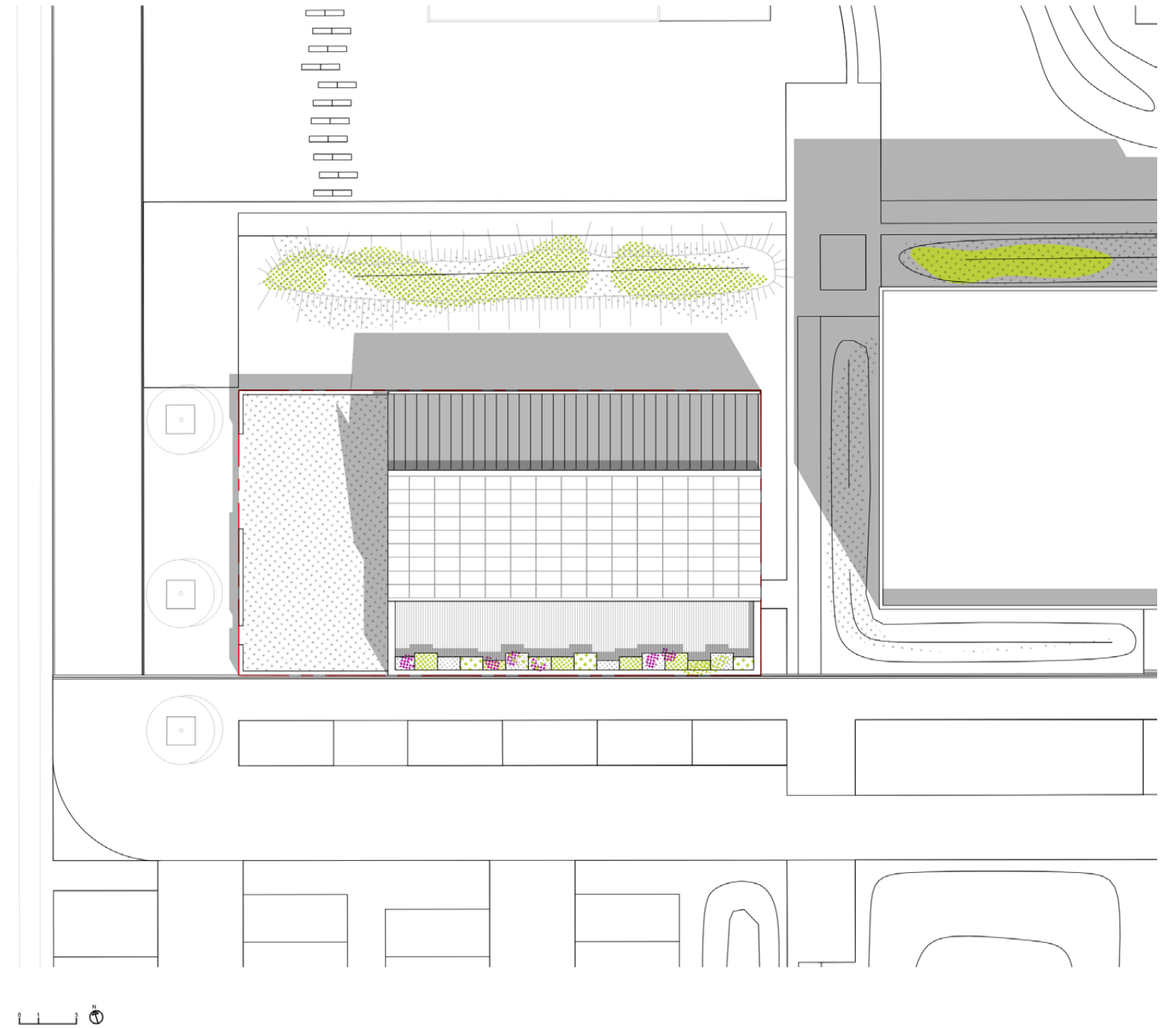
Concrete, timber frame, wooden framework, bricks

Photovoltaic roof (Systovi ®), area : 120m<sup>2</sup>, 72 panels, production 23,7kWc

Rainwater harvesting (4000L)



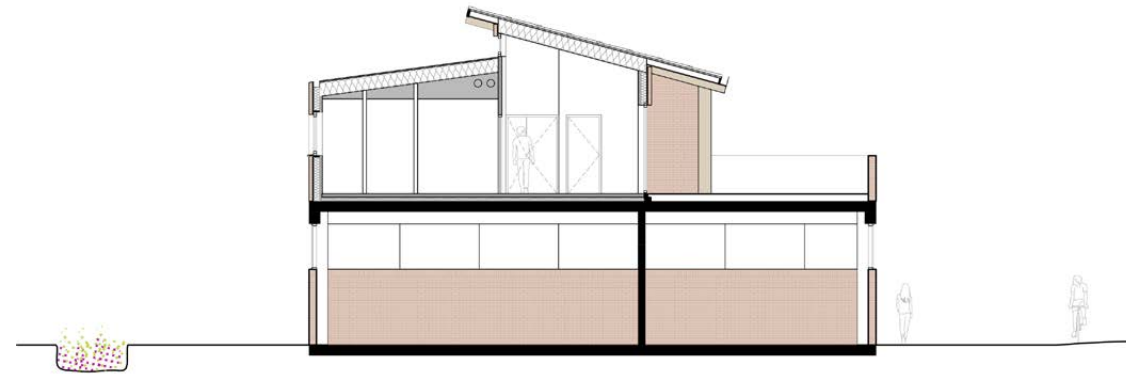
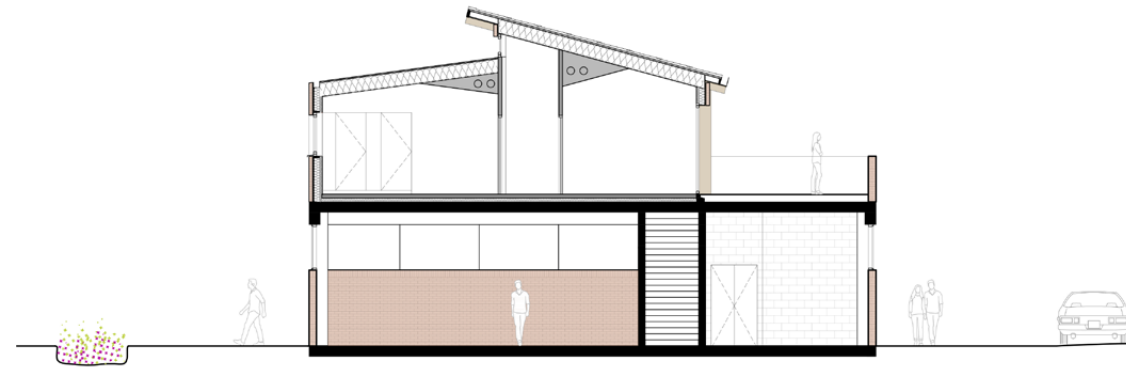
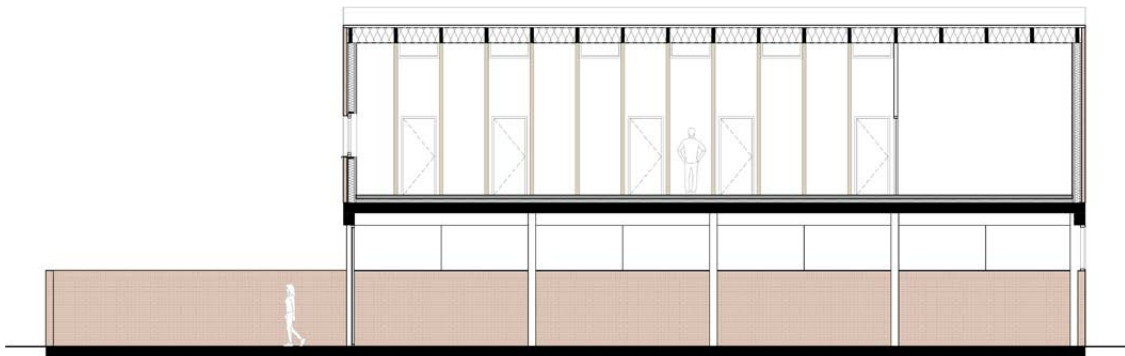
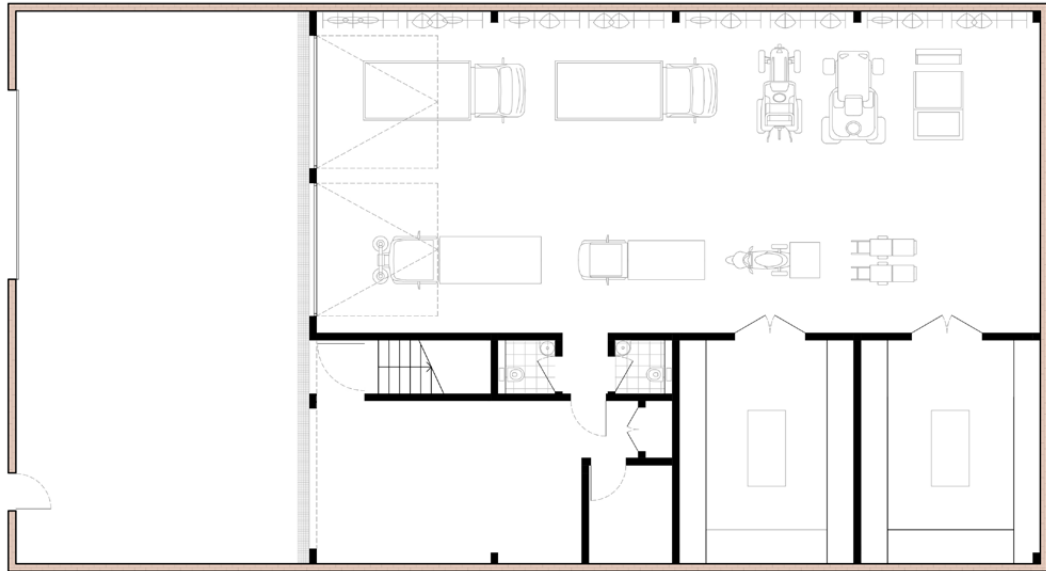
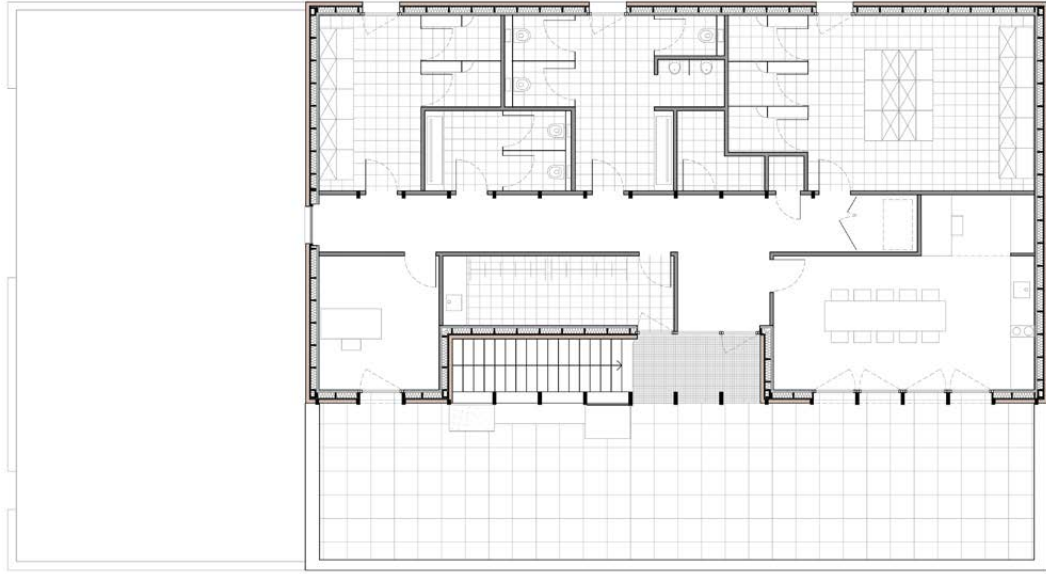
# an house for gardeners



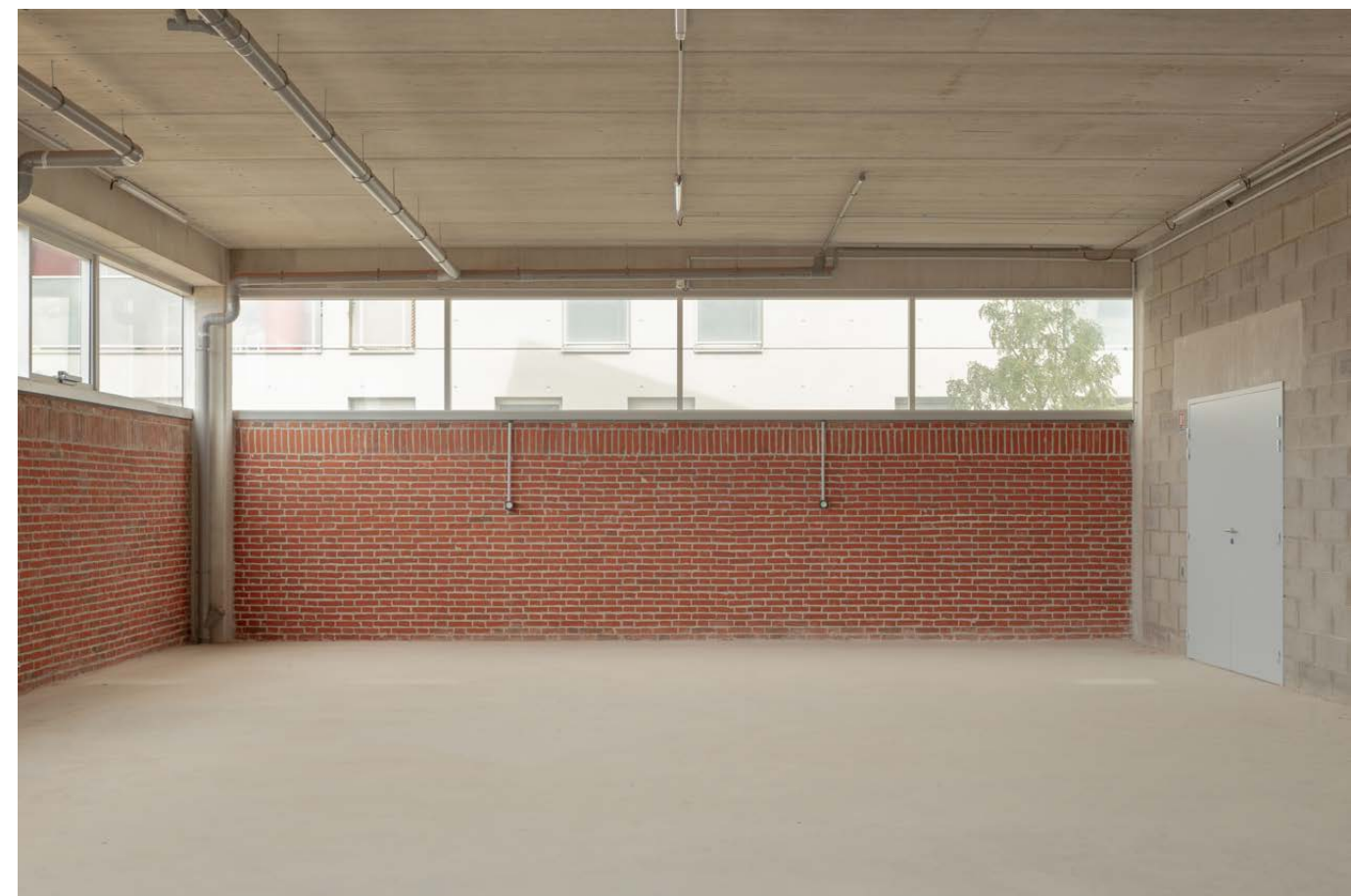
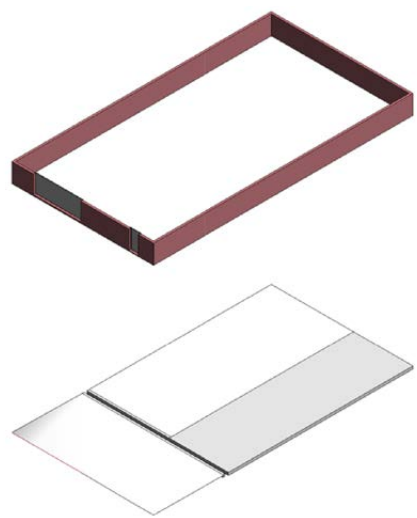




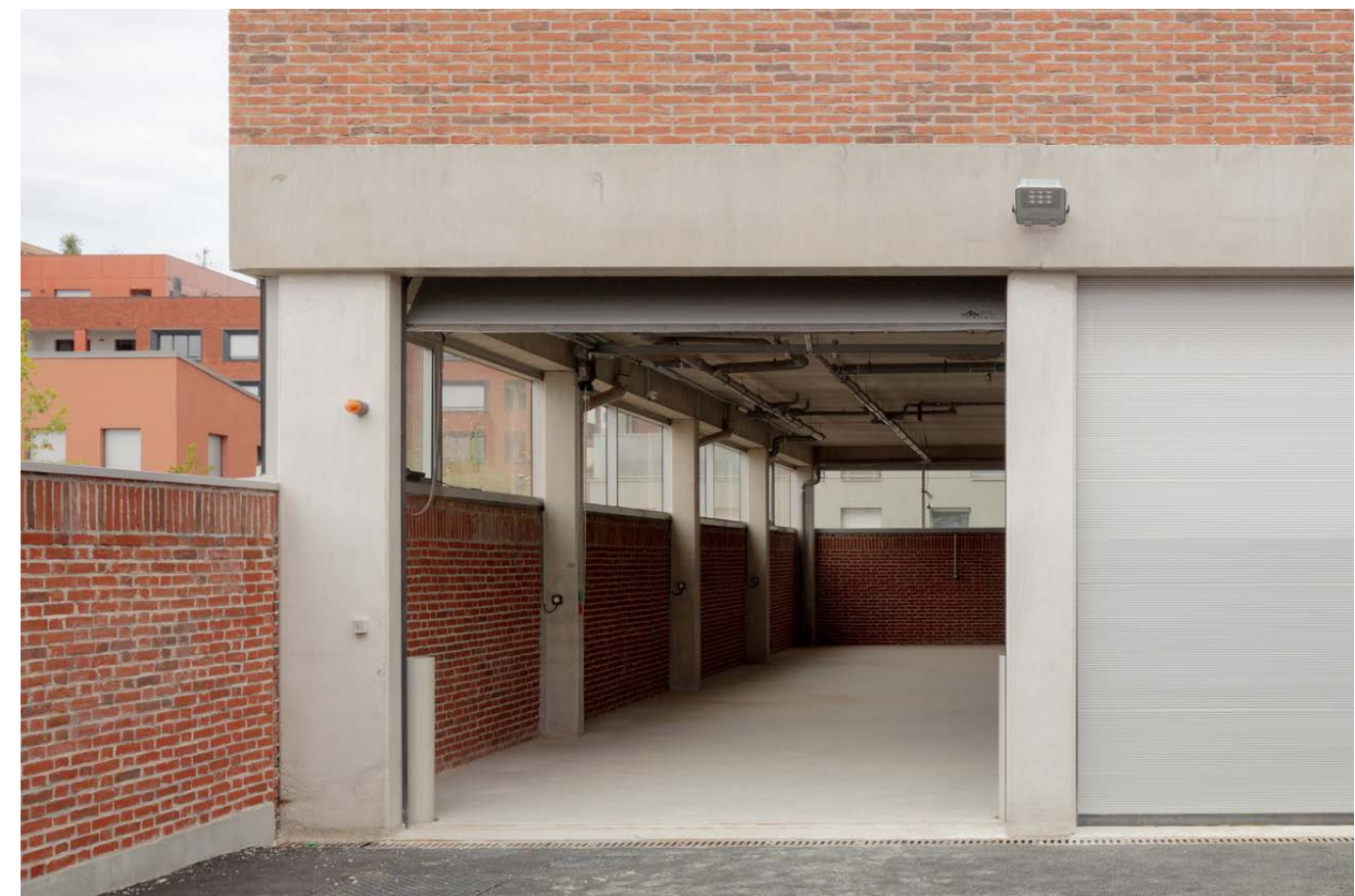
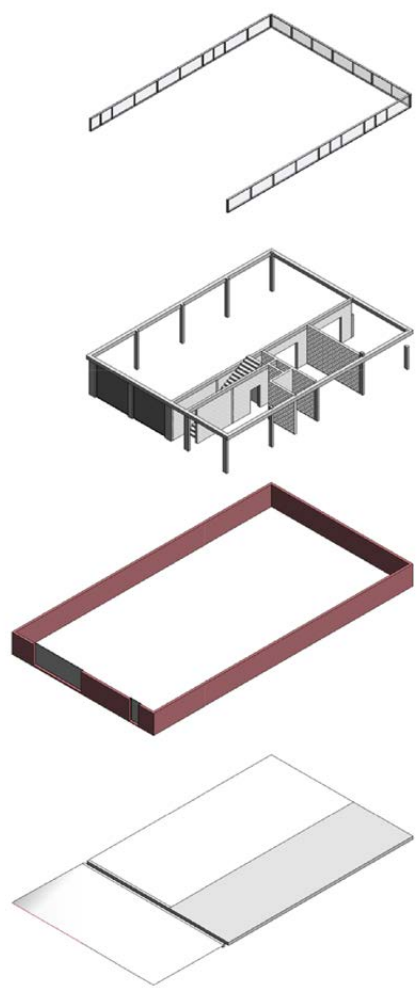




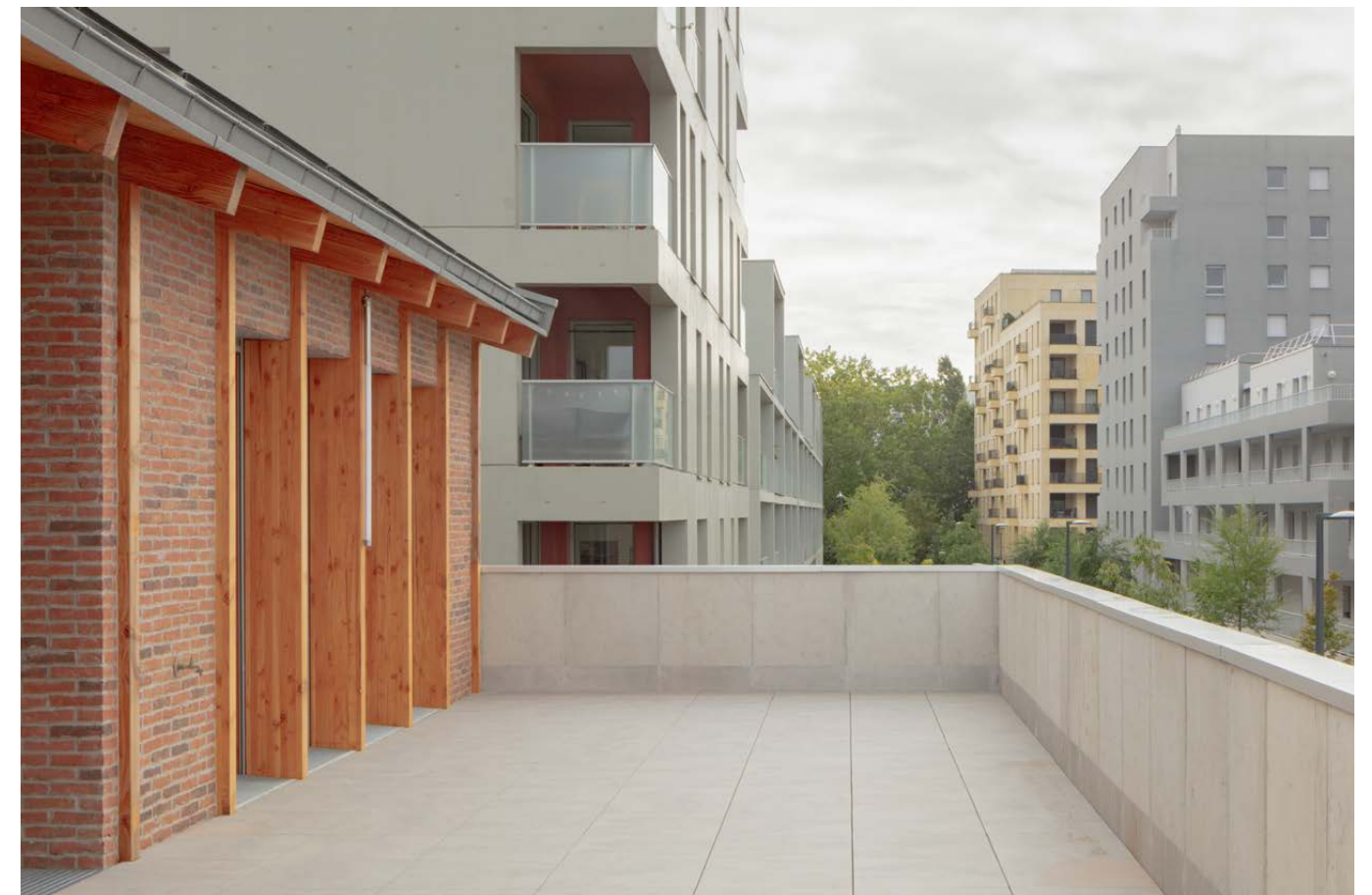
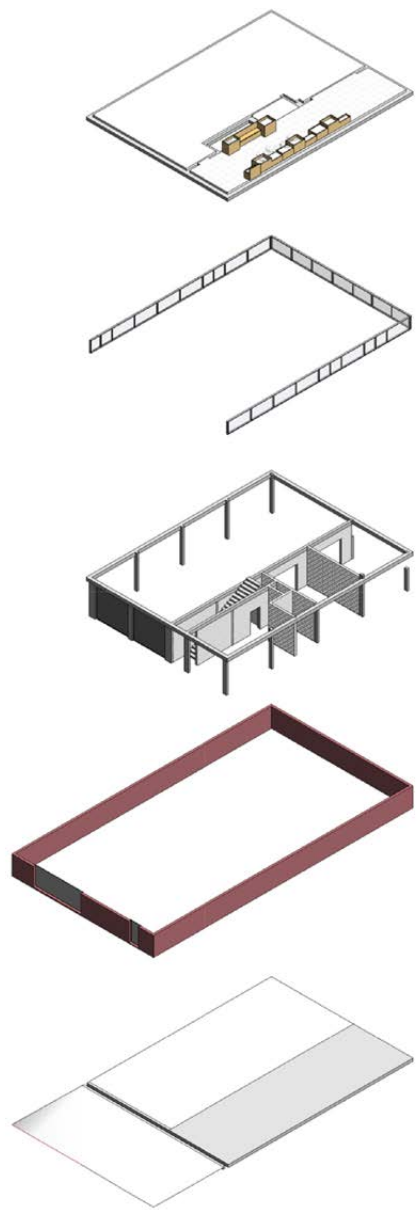




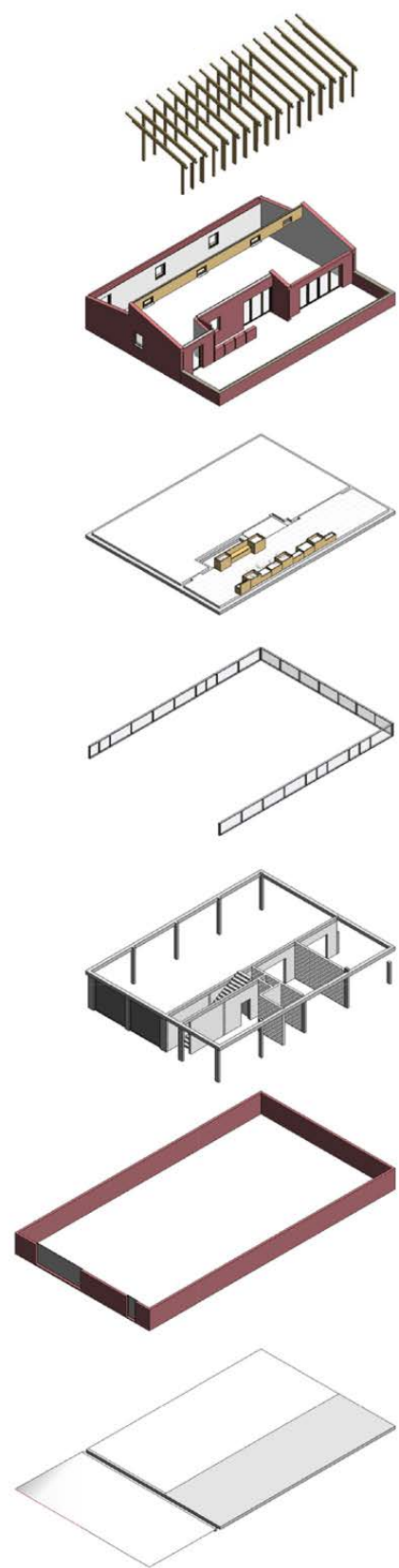




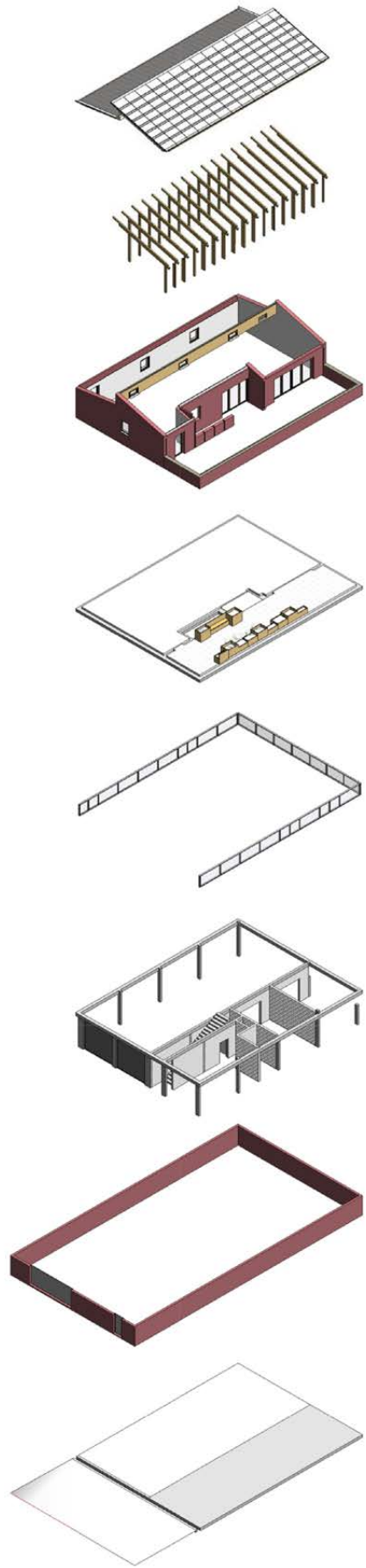








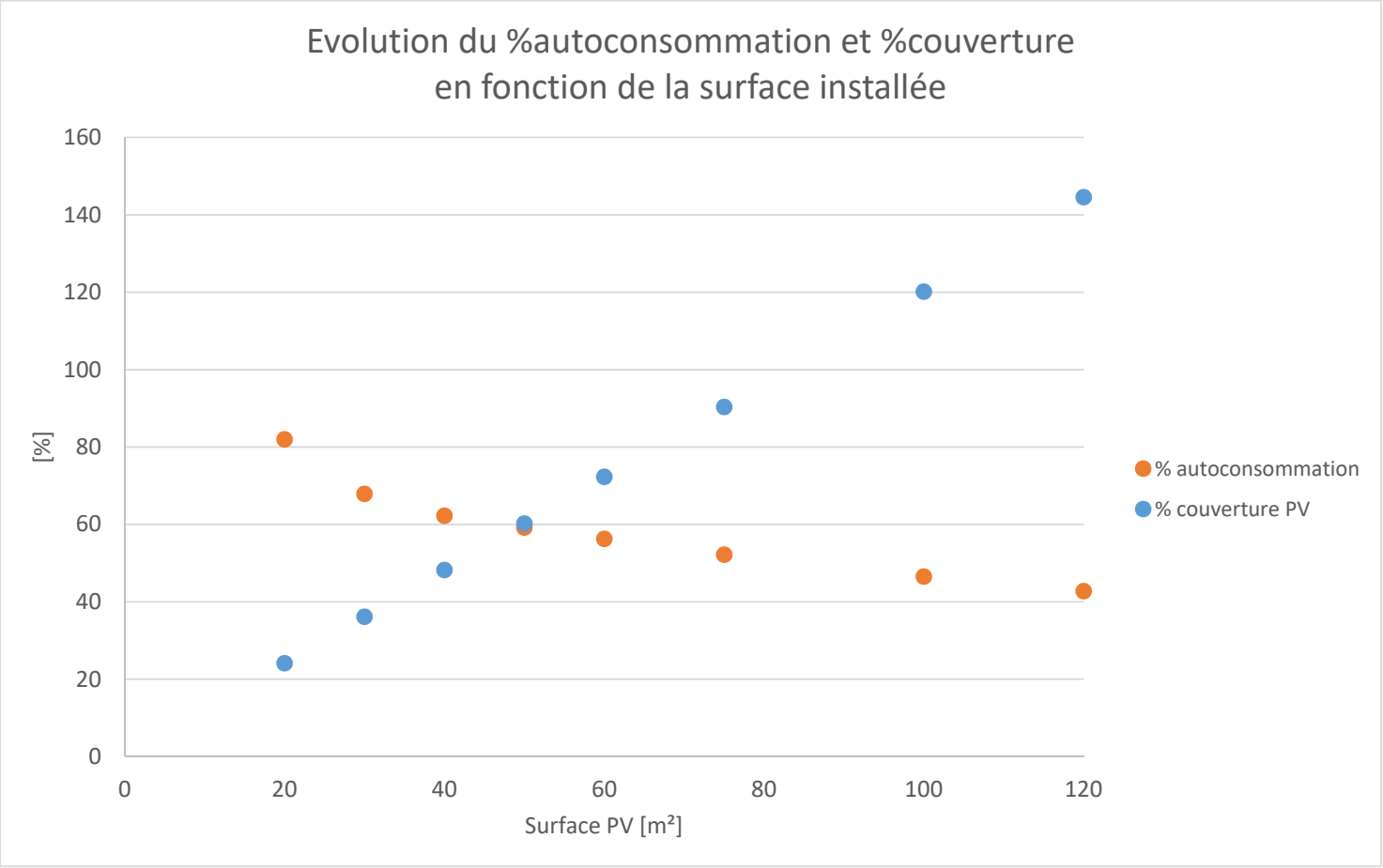




Axonométrie éclatée



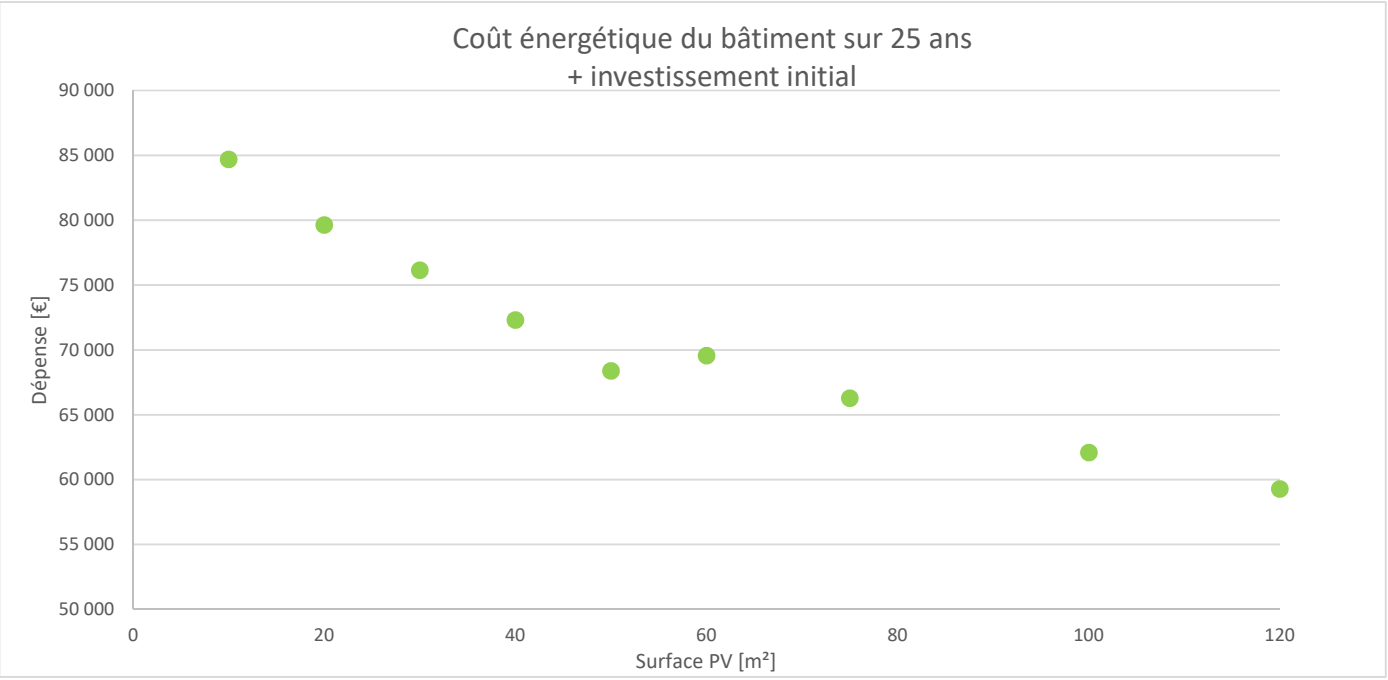
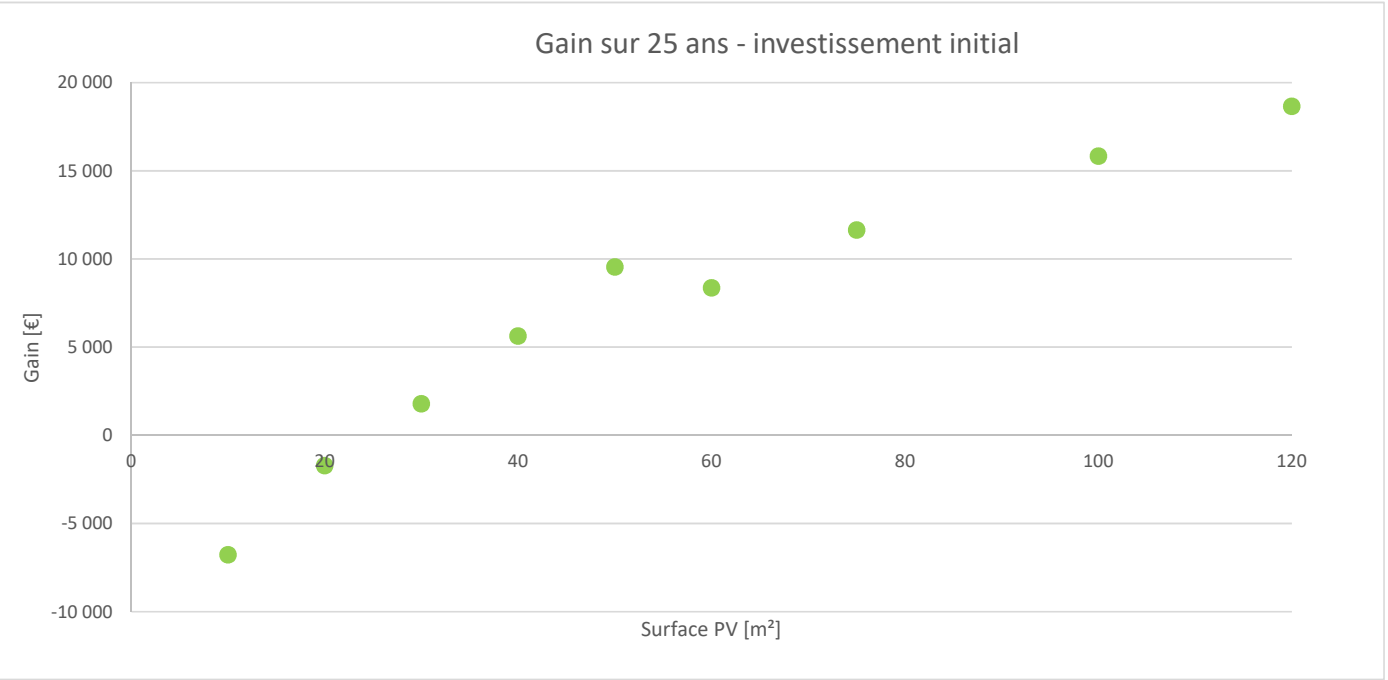




Nota : L'ensemble des calculs réalisés sont basé sur l'estimation des consommations énergétiques du bâtiment effectuée à partir du calcul RT 2012 usage établissement sportif (10 douches/jour 5 jours/semaine) et ne prennent que les usages réglementaire.

Hypothèses :

- augmentation annuelle du coût de l'électricité : 4%
- Rachat production électricité en surplus installation PV  $\leq 50\text{m}^2$  0,10 c€/kWh ;  $> 50\text{m}^2$  0,06c€/kWh
- Prime autoconsommation déduit de l'investissement initial



Les graphiques ci-dessus, permettent de comparer en fonction de la surface de panneaux photovoltaïques installés le pourcentage de couverture des besoins énergétiques du bâtiment, le pourcentage d'autoconsommation de l'énergie produite et la rentabilité de l'installation sur 25.

Il n'y a pas de surface d'installation bonne ou mauvaise, néanmoins la surface présentant le meilleur compromis entre taux d'autoconsommation, taux de couverture et rentabilité serait pour ce bâtiment 50m². Cette surface permet en effet d'obtenir des taux d'autoconsommation et de couverture relativement élevés ( $\geq 60\%$ ) et de bénéficier d'un tarif de rachat de l'électricité produite en surplus intéressant (0,10c€/kWh).



