



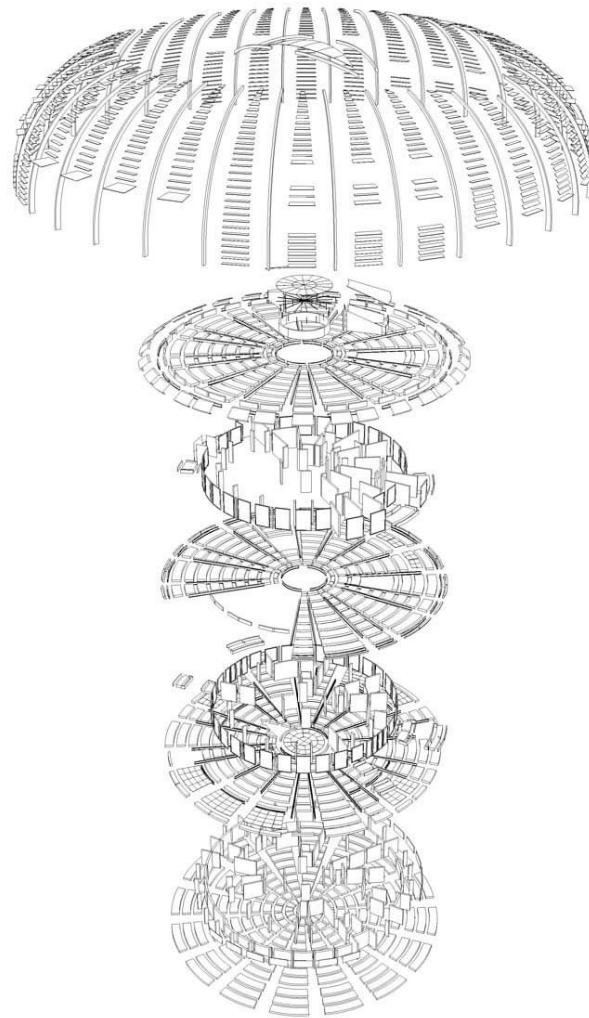
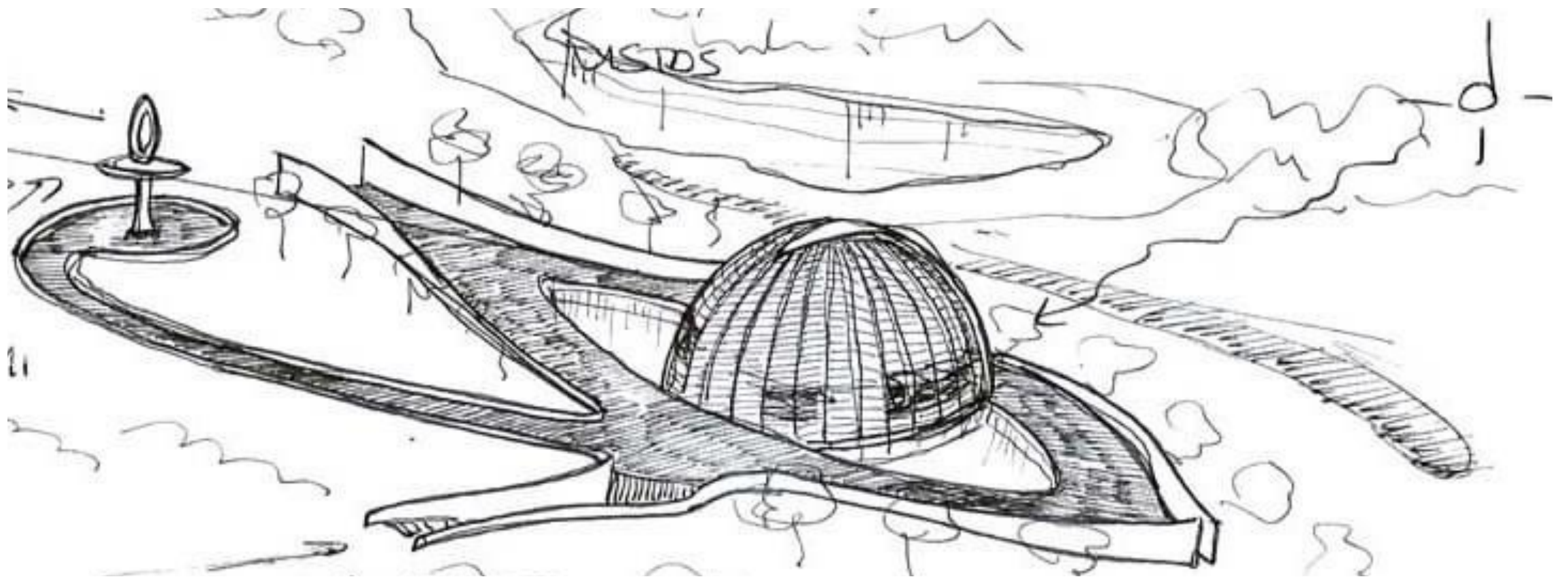
Sustainable Architecture

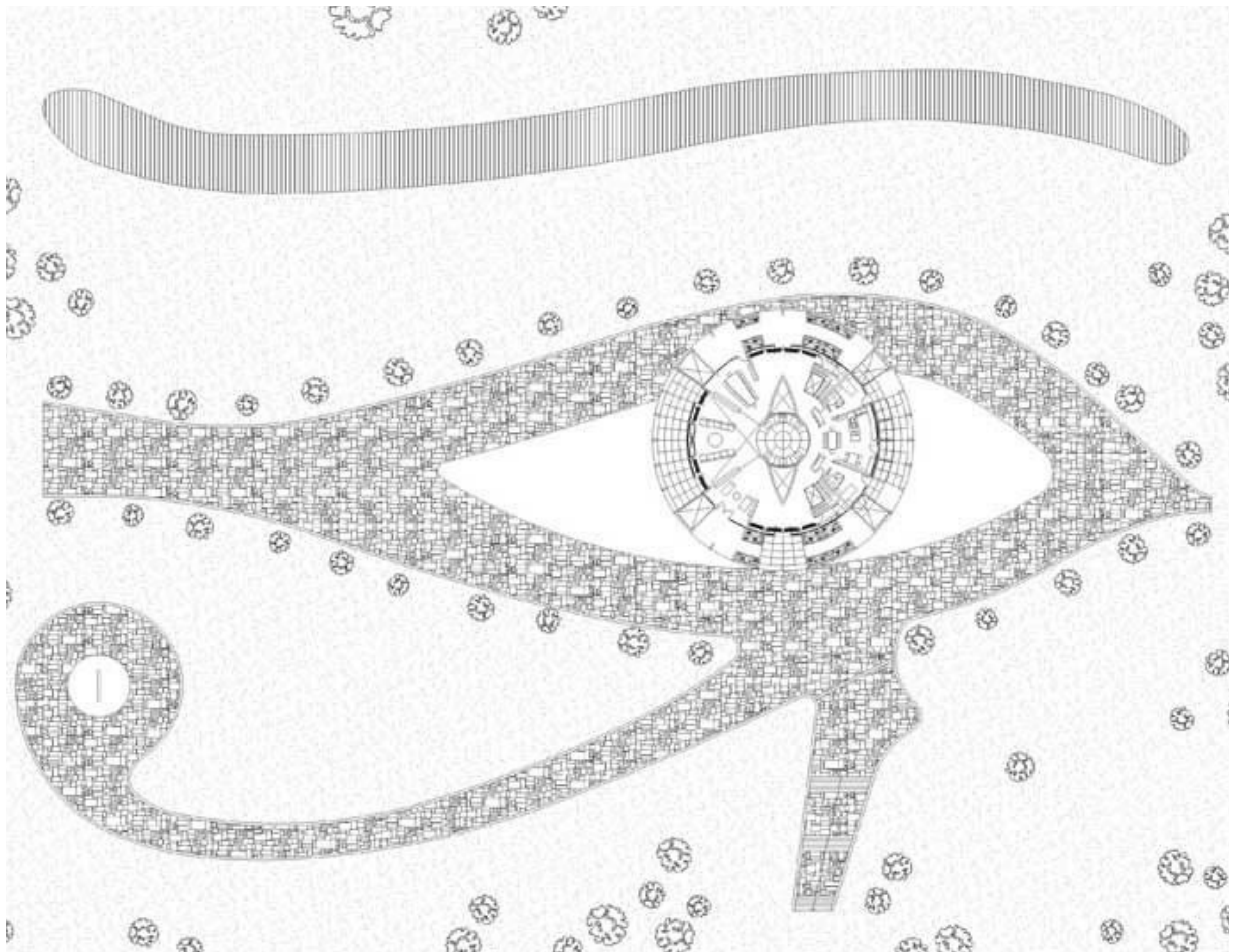
High EYE OF HORUS ECO-HOUSE

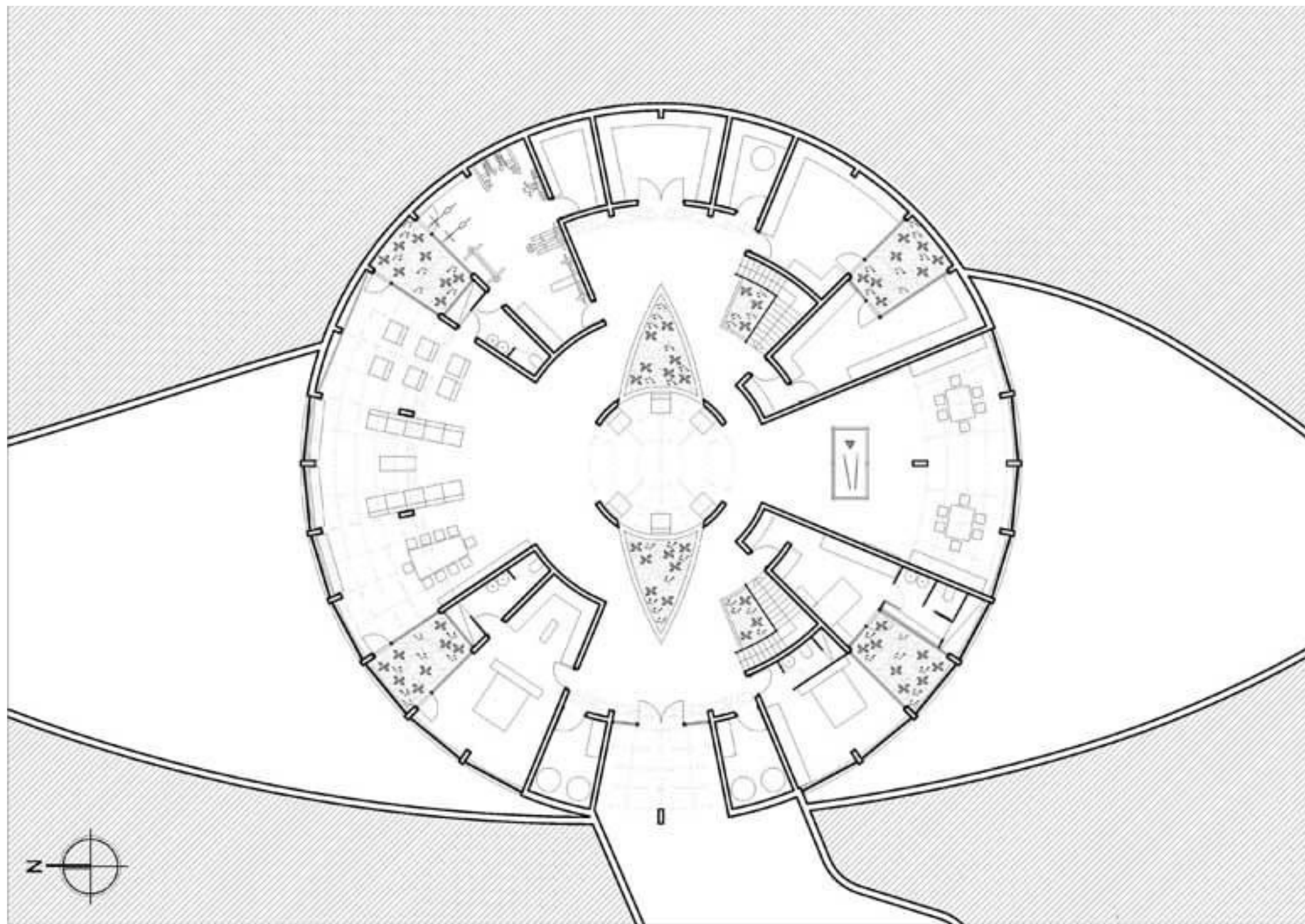
by Faran Lodhi & Luis De Garrido Architects

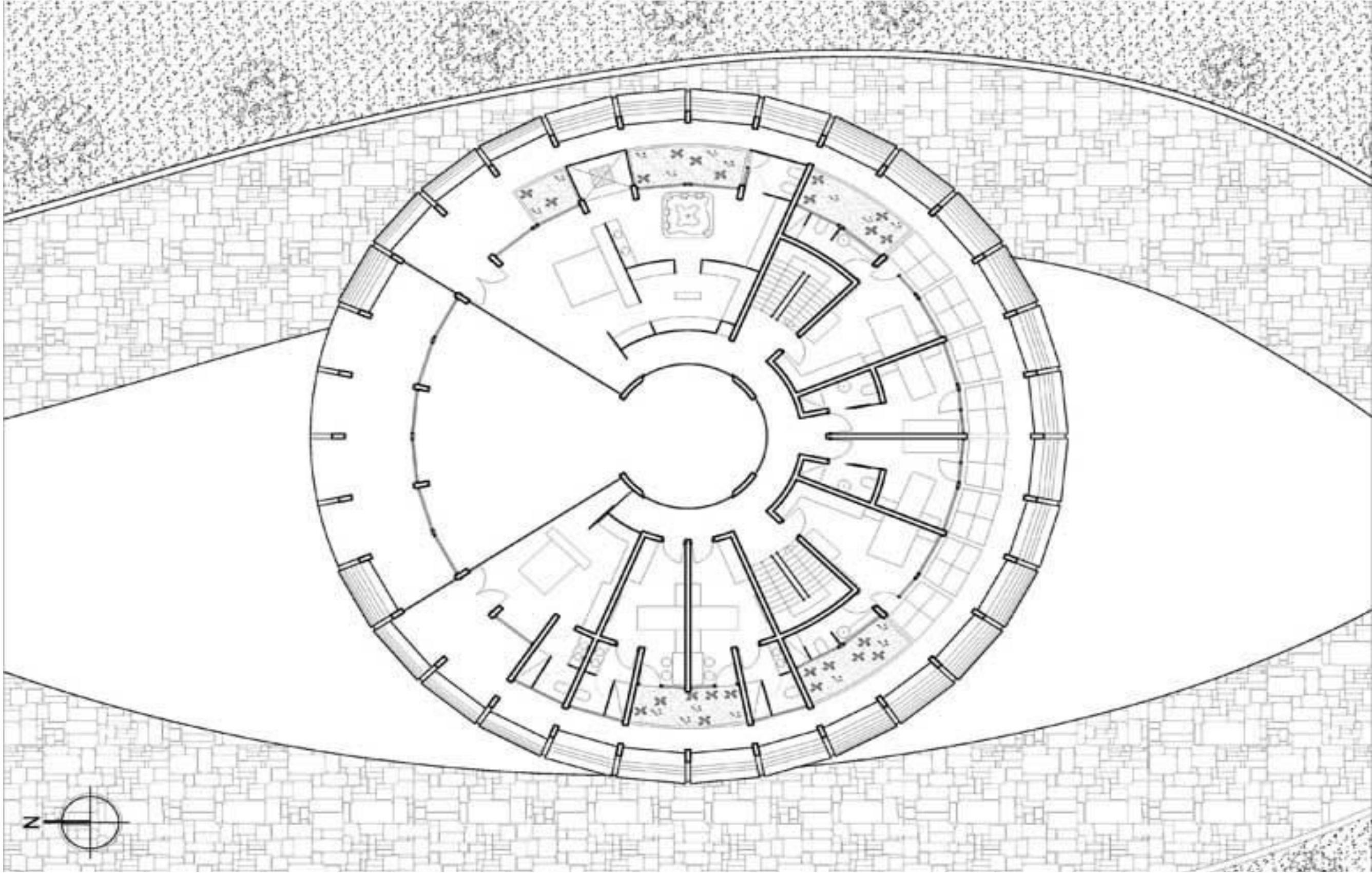
Ain Horus Hotel in Turkey has been designed with a wonderful ecosystem

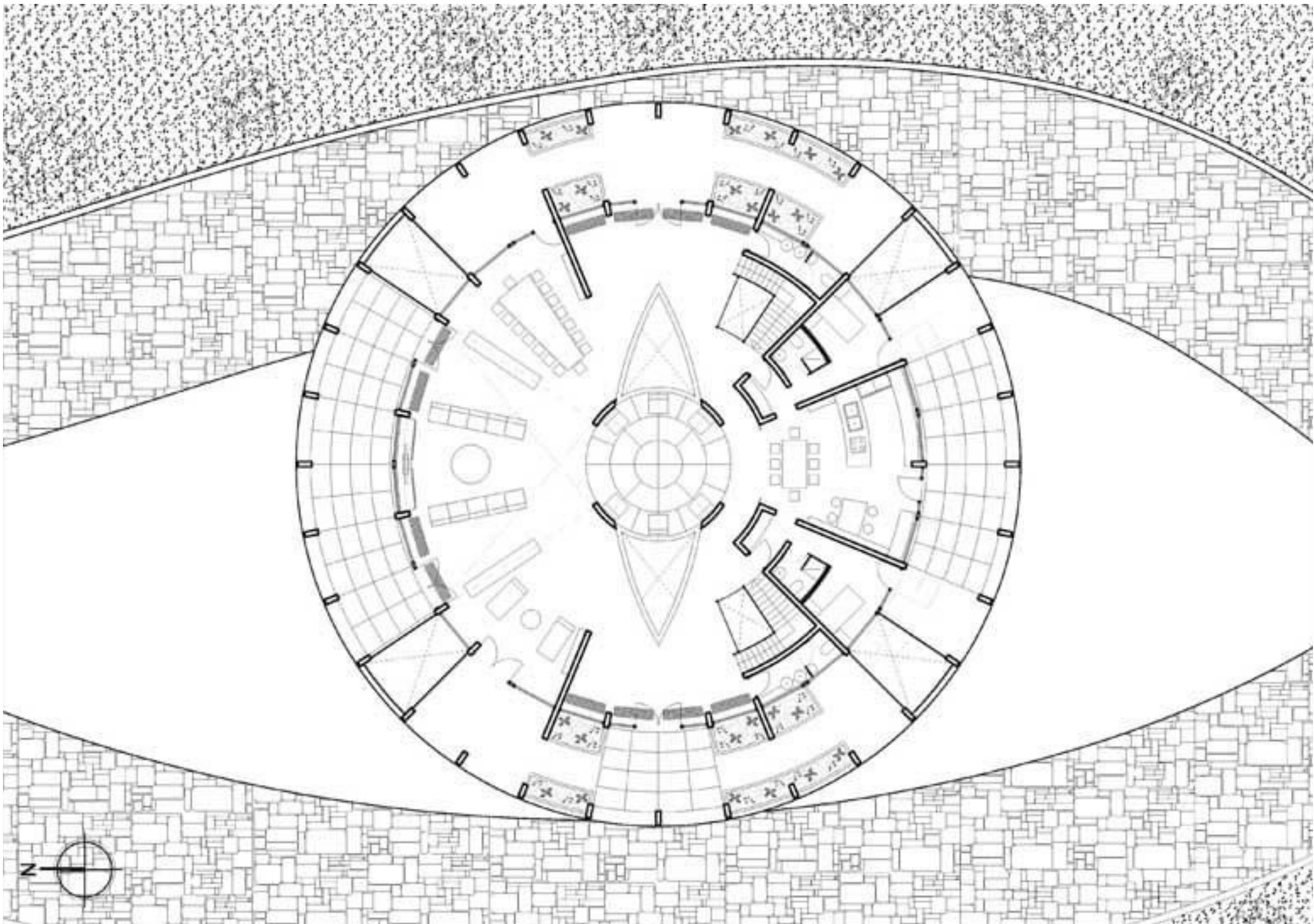


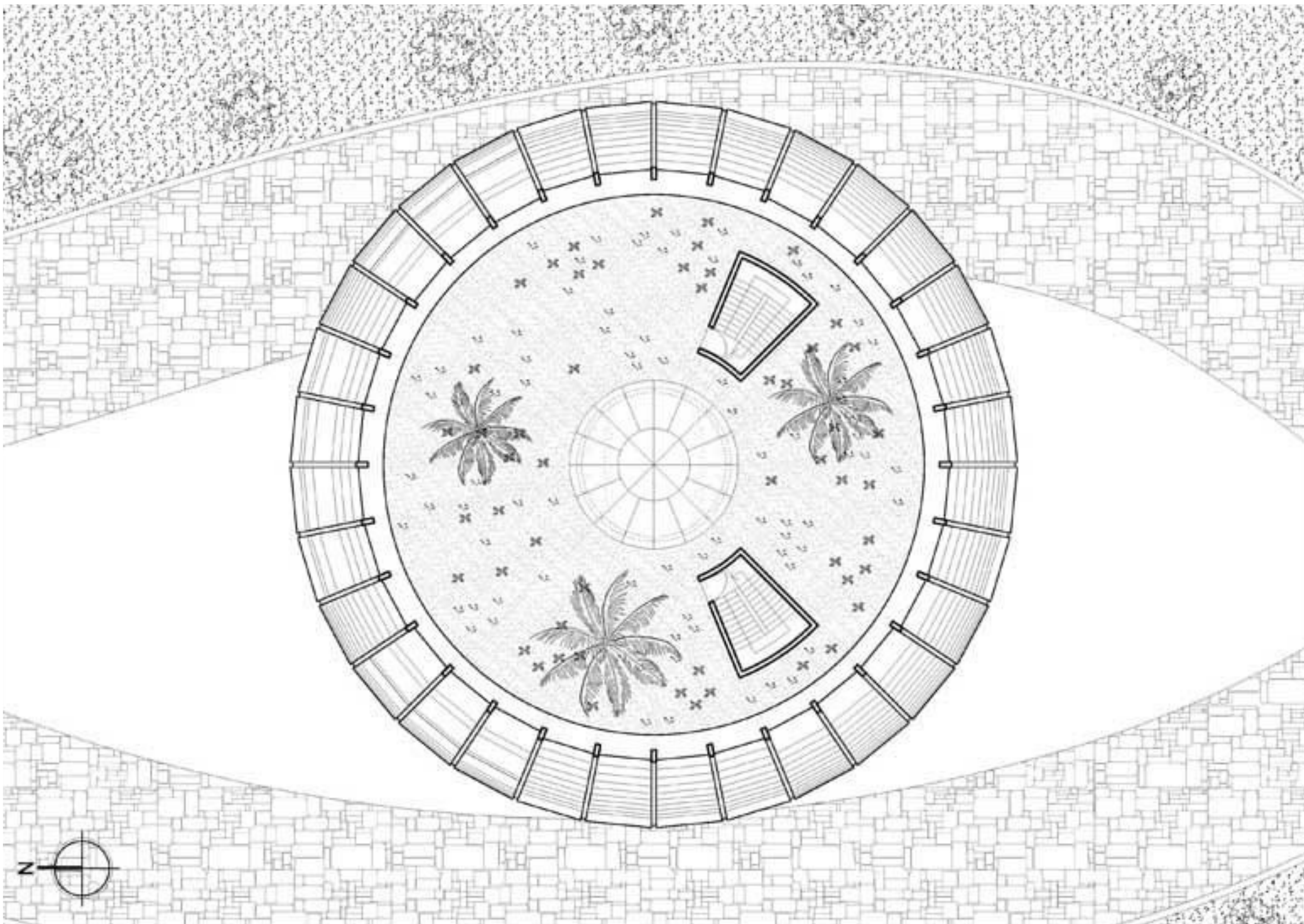


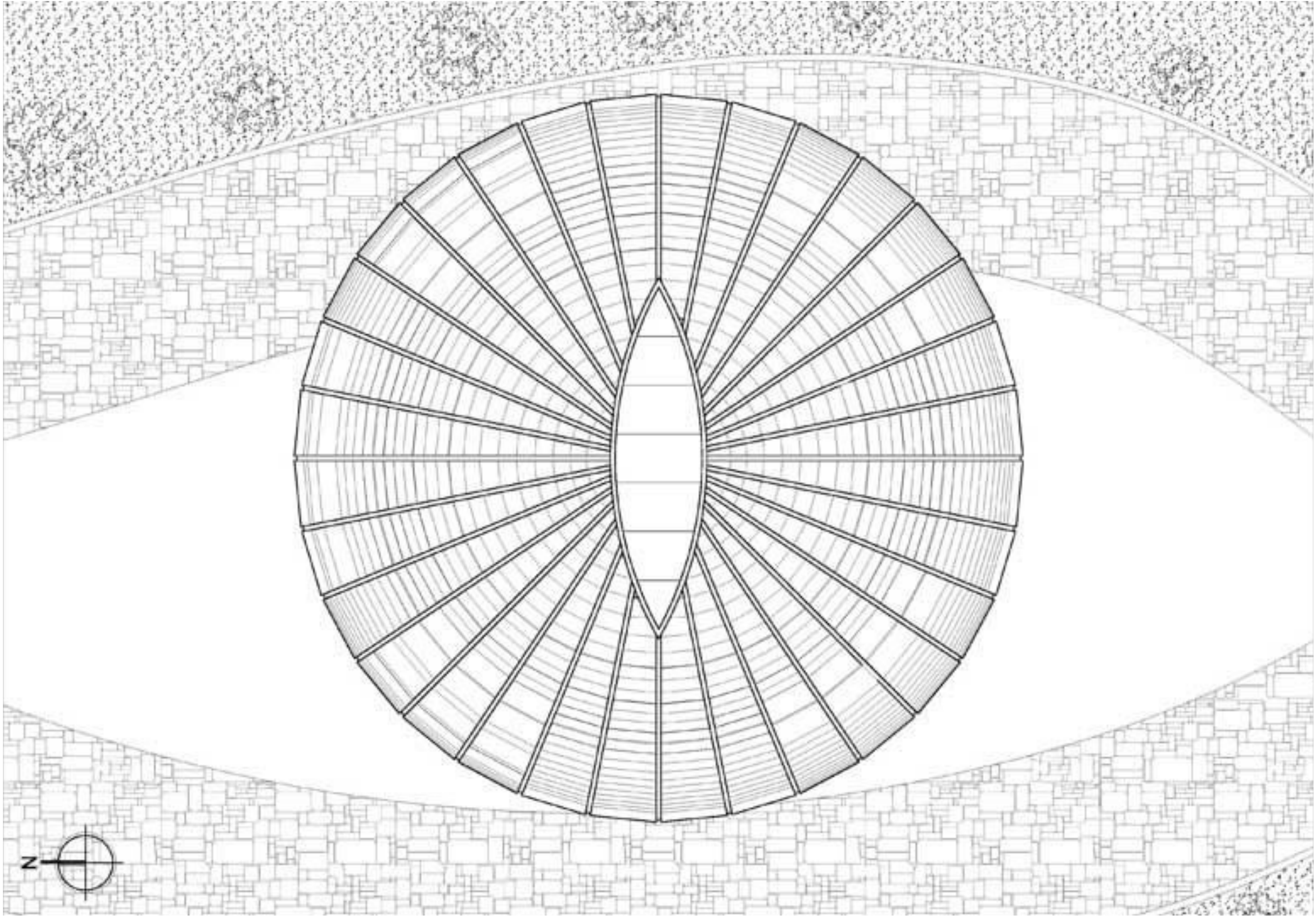


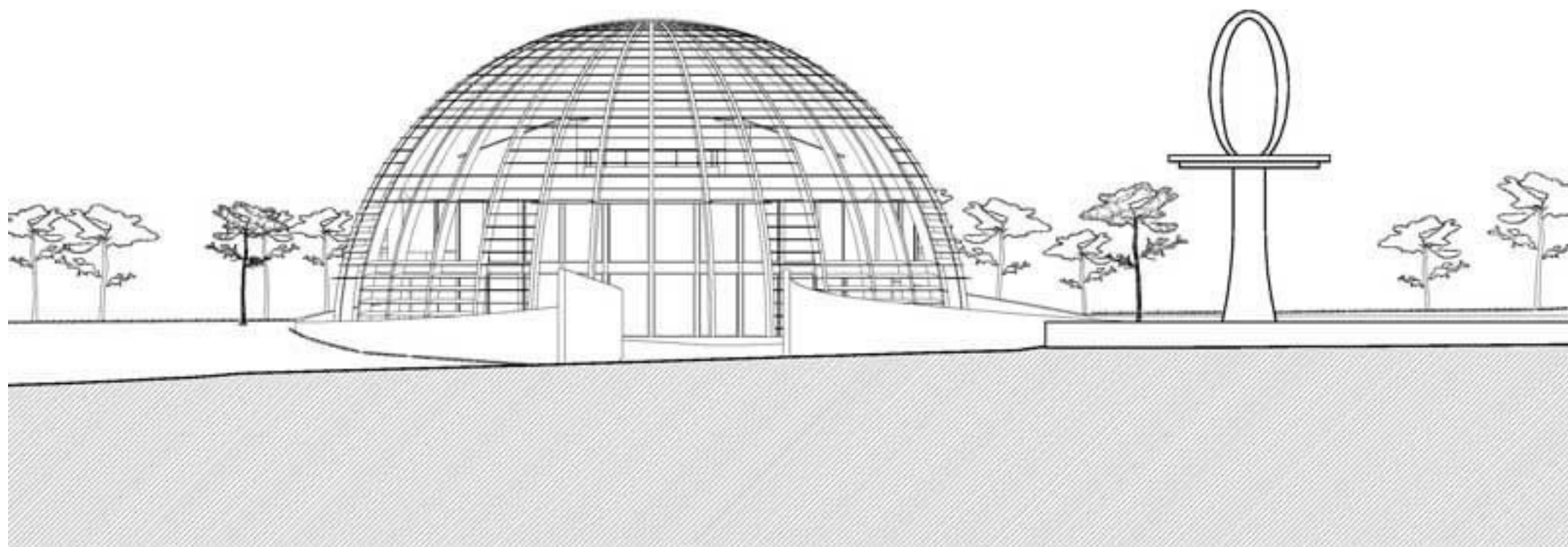
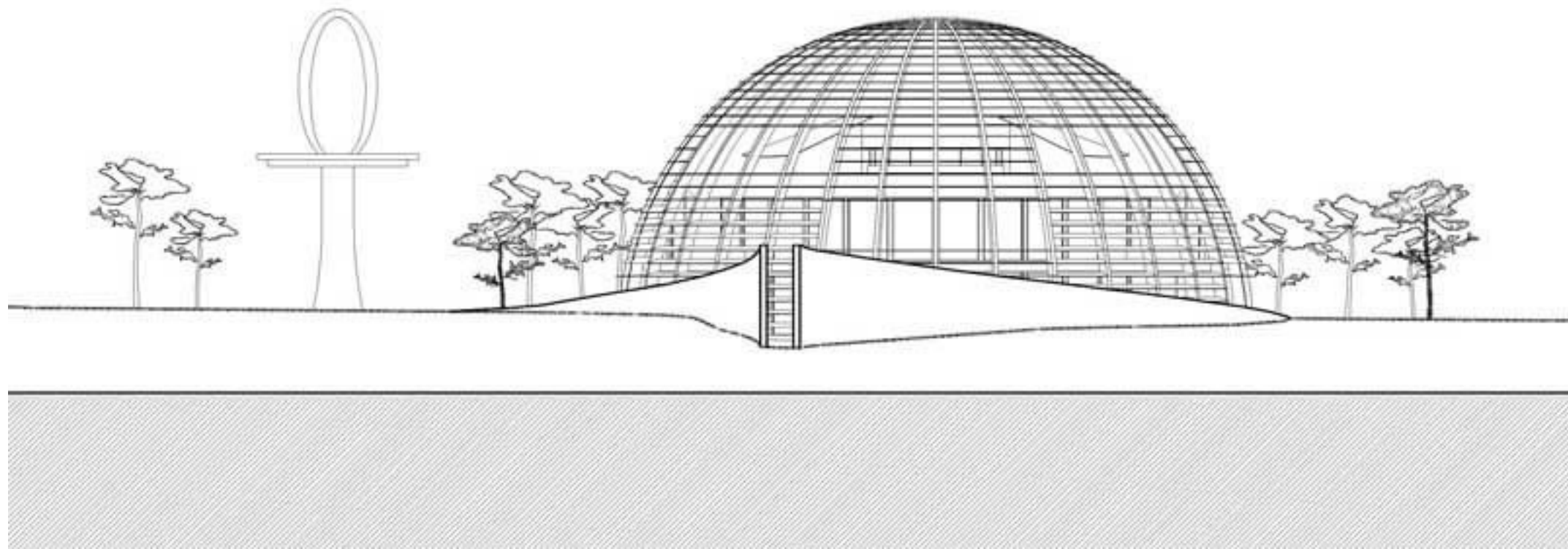












High level of humidity

The housing is self-sufficient when it comes to energy given that the housing uses a combination of geothermic and photovoltaic energy

The upper windows of the central patio close which avoid the loss of hot air from the centre of the housing

The glass flooring allows solar radiation to reach the interior of the basement

The glass dome creates a warm microclimate on top of the house's garden by means of the greenhouse effect

Direct solar radiation penetrates into every interior part of the house, lighting and heating it in a natural way

Garden roof of high thermal inertia

Due to the materials selected, the walls breathe naturally and continually allowing natural ventilation with out energy loss

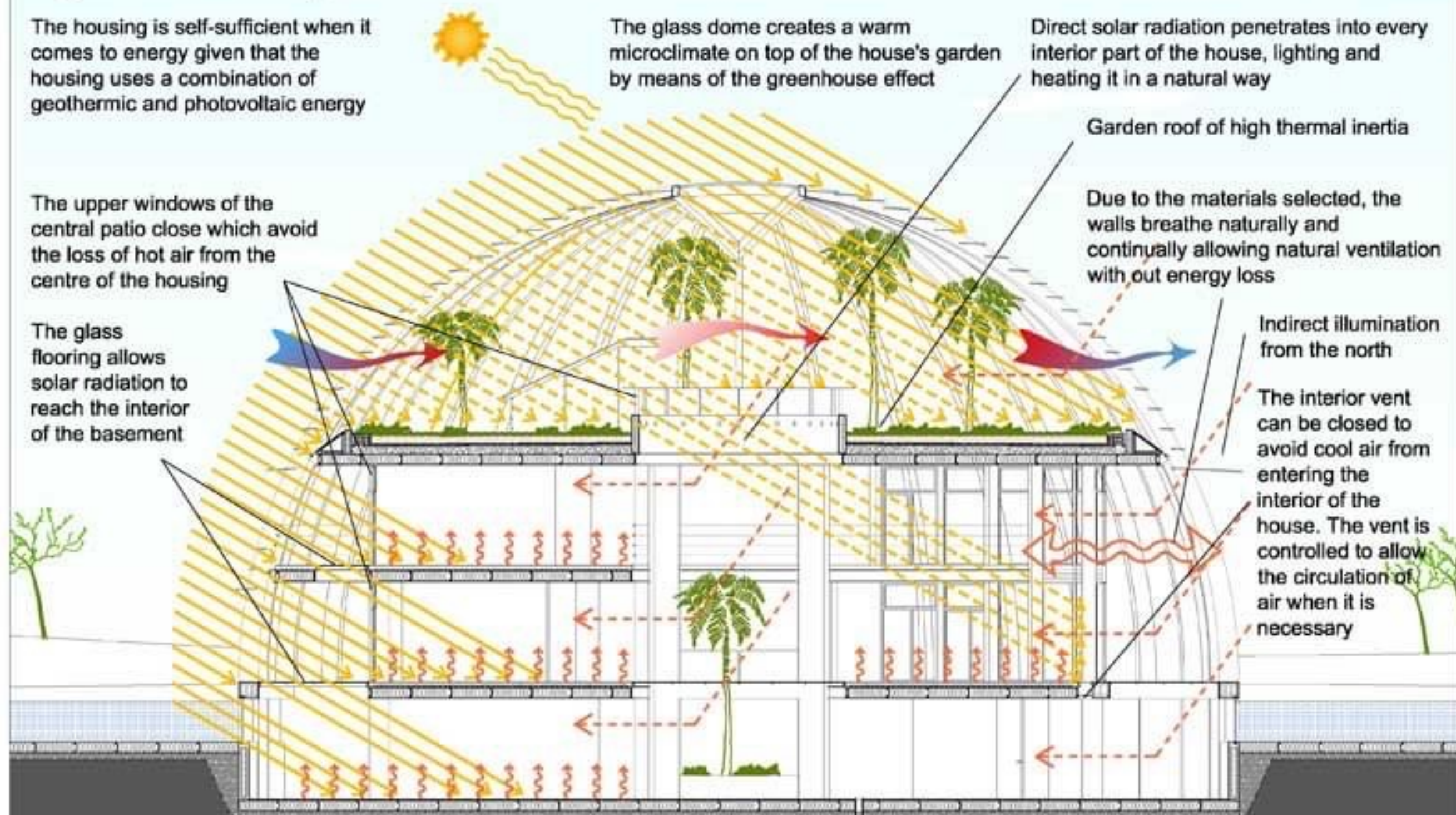
Indirect illumination from the north

The interior vent can be closed to avoid cool air from entering the interior of the house. The vent is controlled to allow the circulation of air when it is necessary

The heat generated by means of the greenhouse effect and by underfloor heating is stored up in the frames and load-bearing walls, which have a high thermal inertia and maintain the house warm during night and day with minimal energy consumption

The housing is heated by solar radiation the greenhouse effect and by means of the underfloor heating, which is fed by an underground geothermal pump

WINTER



High level of humidity

SUMMER

The coverings protect the house from direct solar radiation

Therefore the house is cooled as the air heats and rises

Solar photovoltaic are integrated into the glass coverings

The upper windows can be opened so hot air escapes from the interior of the house

Air from the outside enters through the basement and cooling the house, while at the same time it transfers its heat to the ground

Solar radiation heats the glass louver, while at the same time heat the close air, which rises, escapes between the louvers of glass, and creates a natural air current in the interior of the glass dome

The hot air rises through the house and escapes, by means of the chimney effect, through the upper windows of the central patio. This way the hot air is extracted from the house creating a air current in the centre of the house

The glass dome creates a shaded area and a cool microclimate in the upper garden of the house

The cool air from the basement flows throughout the house cooling it in its path

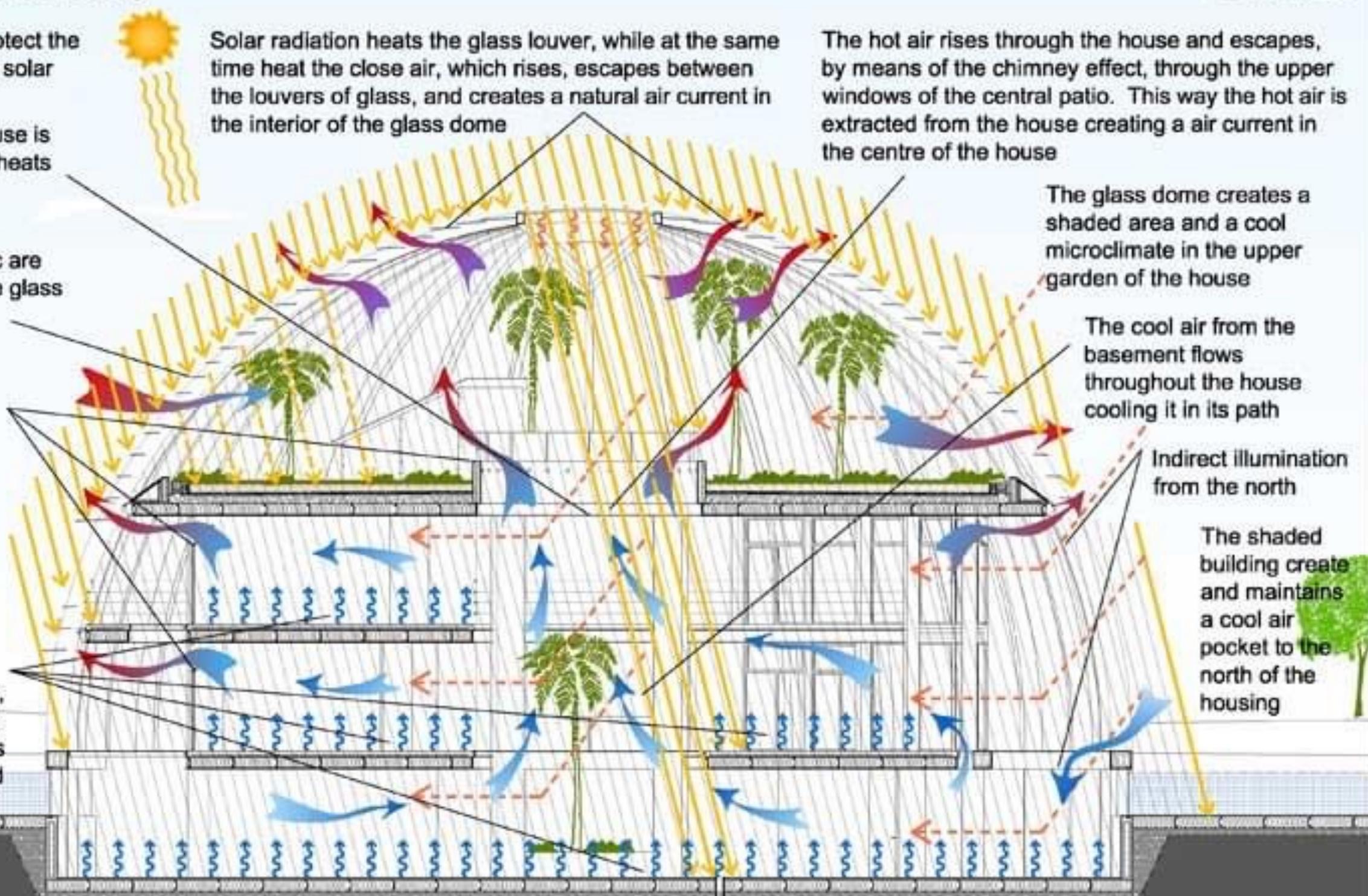
Indirect illumination from the north

The shaded building create and maintains a cool air pocket to the north of the housing

The reinforced concrete walls absorb the coolness from the ground and continually transfer it to the house

A 100 m deep well is drilled for use of the geothermic heating system

The house cools at night due to its high thermal inertia, and remains cool throughout the entirety of the following day, without consuming energy









Thank You

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