

# References

## Hanging gardens of babylon

The gardens must have existed for over 250 years. It is possible to determine from the descriptions how large the gardens must have been, but traces of such foundations have never been found. The gardens consisted of terraces, surrounded by walls on which trees, flowers and plants were planted. The plants hung over the rivers of the Euphrates. The walls consisted of a large hollow construction, filled with fertile soil. The construction of the irrigation system was not visible. Each terrace needed a supply large enough to supply all the plants with water. The irrigation system consisted of 2 wheels, one in the upper water storage and one in the water storage below. The two wheels were connected by a cable with buckets connected to the cable. Slaves provided movement in the cable so that the upper water storage could be filled. A ledge was created at the water basin, causing the buckets to turn around at the water basin. (Wereldwonderen,sd)

## Ab anbar

An Ab anbar is a water storage tank originally found in Iran. the tanks are build largely underground so that they have a good resistance against earthquakes. The pressure of the water in the basin is absorbed by the surrounding ground. The basin is covered with a layer of bricks with a special type of cement, saruzj. The dome build over the tank is made to capture water that would otherwise evaporated in the high temperatures. Wind towers can be build with an ab anbar to keep the water cool throughout the year. An added effect of the windcathers is that the room is very well ventilated preventing it from being damp. An ab anbar can be filled by underground tunnels originating at a qanat. (Ghanavati, sd)

## Caravanserai

A caravanserai is a place along the silk route where travelers could rest safe and even trade. The building had multiple functions and there are many found on the silk route. One of the functions of a caravanserai is to provide a safe overnight stay for traveling merchants, their wares and their animals. Buildings were generally situated one day's travel of each other. A caravanserai usually consisted of a large courtyard with a closed ring of buildings around it. The gate had to be wide enough for camels to pass. In the buildings there were small niches and a room where both travelers and animals could sleep. In the middle was usually the courtyard where most of the activities took place. Here people met, animals rested and small bazaars were set up where merchants could trade their goods. The courtyard often housed a fountain or a large well to provide water. (Society, 2019)



Image 10, Hanging gardens of babylon (Graphicaartis/Corbis, s.d)

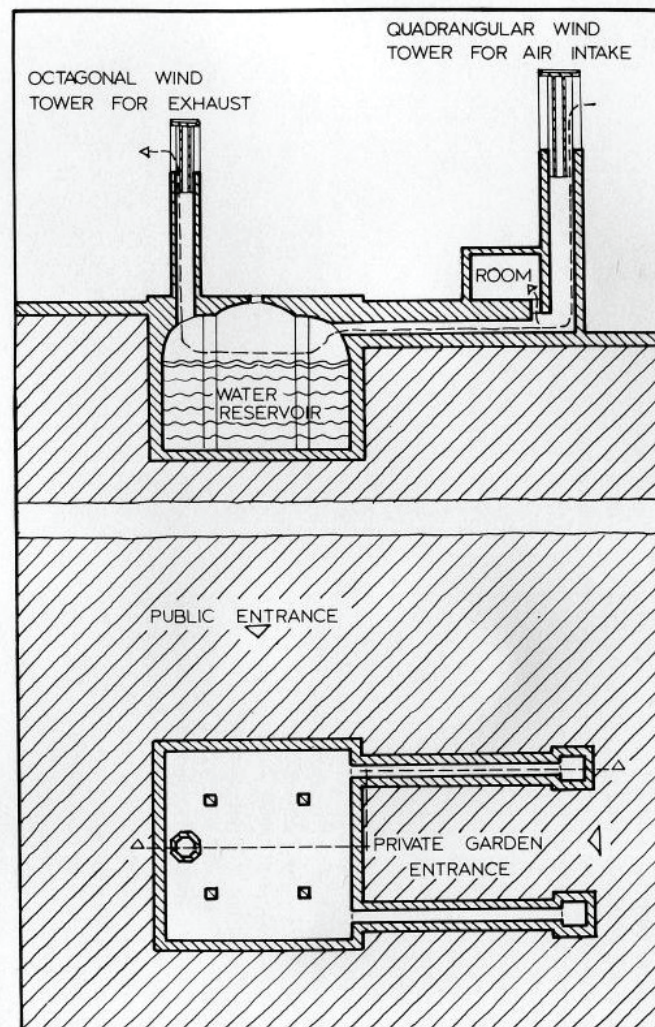


Image 11, Ab anbar (Encyclopaedia Iranica, s.d)



Image 12, Caravanserai (pasabag, s.d)



## Bazaar

Bazaars are permanently enclosed marketplaces that are central to everyday life in the Middle-East, North- and West Africa and parts of (South-East) Asia. These buildings carry great cultural value and date back to 3000BC. Some bazaars are known to be over 400 years old. Bazaars are a network of merchants, bankers and craftspersons who often group with businesses like their own. This enhances the economy because they all compete for market share and it is easy for customers to compare prices and quality. There are different kind of shops to be found: Jewelry and pottery shops, Furniture and carpet shops, Leather and clothes shops, Tea and herbs shops, Restaurants and tea houses. The bazaar also forms an important meeting space. The layout of a bazaar has four main elements, which each fulfill a different function:

- Rasteh Lanes: with shops across both sides
- Caesarea: Similar to the Rasteh, but more expensive products, like jewelry and silk are sold here,
- Chaharsough: This is the junction between Rastehs, which is used as a meeting space. It has a tall dome and a fountain in the middle.
- Timcheh A small indoor space which houses small factories and furniture shops.

Most bazaars are always open, products are mostly produced on site in small factories at the back. They are located near mosques and have their entrances turned towards them. Often, pop-up stores appear around the entrances. (Smit et al., 2019)



Image 12, Bazaar (Wood, s.d)

## Indian stepwell

Stepwells are underground buildings usually with a central pond or well. They are usually located in arid regions of western India, Pakistan, Indonesia and surrounding regions. They were built to provide the local population with water during drier periods of the year. The water can be used for drinking, washing, bathing and irrigating crops. It is a central well that extends down into the underlying water table. The integration of stairs makes it easier for people to access the water supply. Many stepwells also served as cool shrines for traveling caravans and pilgrims. Stepwells were built by excavating several floors underground to reach the water level. When the water level is reached, the wells and walls were lined with masonry and stairs were also added from ground level to the water reservoir. Many stairwells gradually narrowed from the surface to the lowest point, where the temperature is refreshingly cool. In villages they were also known as withdrawal wells. Since fetching water was a task often assigned to women, it was also a social activity. (McFadden, 2020)

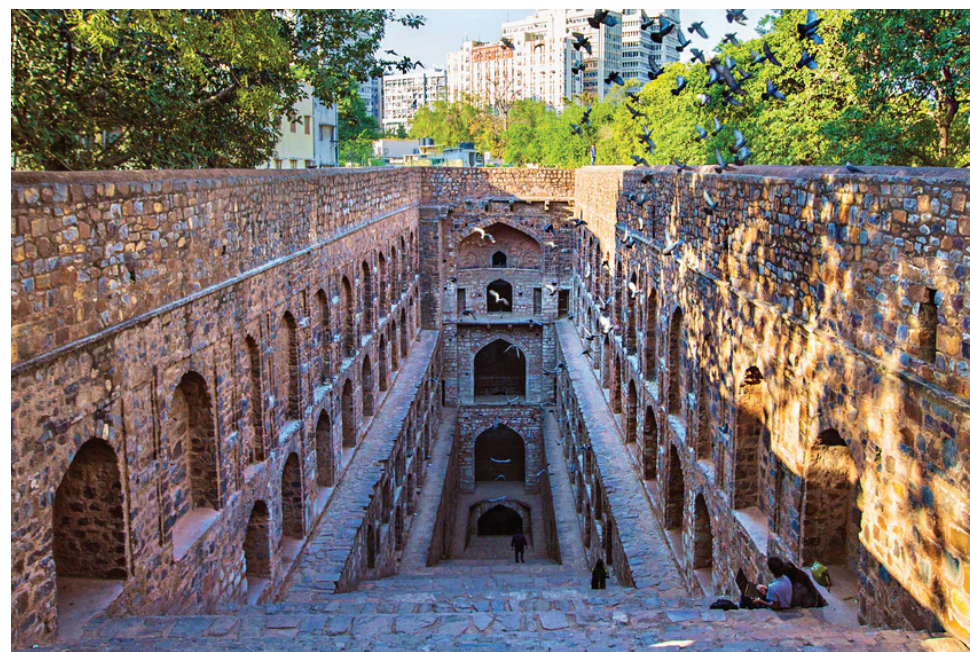


Image 13, Agrasen Ki Baoli stepwell (Xavier Arnau, s.d)

## Conclusion

Certain points emerged from the reference study that we want to include in our design. We want different levels with roof terraces (Babylon) where they are connected with a design for a stepwell. The water is stored underground to prevent evaporation (Ab anbar). The water can then be used again in drier periods during the year. To get the water up there, there will be several holes in the ground to get the water out of the storage with rope and buckets. This is also more hygienic and prevents it from becoming unhygienic after a while, just like the stepwells. We want to have several shops in the plan where all products are produced on site in small factories (Bazaar). There are houses around the shops to make the area attractive at night.



Image 14, Chand Baori stepwell (Matthias Kestel, s.d)