

## Appendix 4: Architectural details of sites and structures recorded by MJAP in 2003 and 2005

Structure	Description	Measurements	Construction
Cistern (Kūh-i Khāra)	The cistern is rectangular in the north, but the southern wall is curved. It has been dug into the bedrock on three sides, before a baked brick lining was added and the north wall built. Herberg's sketch indicates a side chamber, or possibly access steps to the east, although this area is now obscured by spoil.	The structure measures 8.2 x 4.95m, with up to 1m thick walls. It is currently over 4.5m deep (74 courses of bricks are extant in the east wall, 63 courses in the west), although excavation would be required to ascertain its original depth. Assuming a flat base, the cistern's capacity was at least 85m <sup>3</sup> .	The north wall is damaged, but a 'bulul' or water pipe survives, 13cm in diameter. A large patch of plaster also survives here; it is 2cm thick in total, and consists of 2 layers – a coarse lower layer of loosely compacted plaster with lots of inclusions.
Guardtower (eastern)	Controls access along the Hari Rūd to Jām from the east; 18m from the river, and 27.8m from another stretch of wall to the north, of undetermined purpose; smaller internal walls have been exposed by a robber hole.	At least 13.5 x 10.5m, with walls standing >1.8m high. Where exposed, the walls are 1.75m thick.	Roughly constructed out of angular, medium- to large-sized stones laid between two large boulders.
Kiln	Well-preserved, located 50–60m from the East Bank of the Jām Rūd (EJR), on the north-facing slope of a tributary wadi. The tributary is diagonally to the south of the Hebrew cemetery, and opposite an Islamic 'holy' man's tomb and the reputed location of Ghiyāth al-Dīn's mint (all on the West Bank of the Jām Rūd – WBJR). Part of the kiln has collapsed or been robbed, and its western limits remain buried, but much of the structure in the centre / east survives. The flues between the internal arches are half-blocked, especially lower down, with concreted ashy deposits. Much of the interior	The kiln is large, measuring over 4m long, 1.7m wide and over 1.7m high. The eastern wall has an arched stoke hole, 70cm tall and 66cm wide at its base; a circular rake-out hole, 40cm in diameter and with associated ash, is located 75cm below the base of the stoke hole.	The chamber consists of at least six arches, (possibly springers supporting the superstructure where the actual pots were placed) 52cm wide, with 12cm wide flues separating them. The arches appear to abut the outer wall of the kiln. The bricks in the arches are laid as headers and stretchers, and measure 29 x 14 x 6cm. The mortar between the bricks is white / green, brittle and ashy. It is 3–4cm thick.

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	of the kiln is highly vitrified, covered in a hard, greeny-grey bubbled and molten coating, which probably represents the melted surface of the brick walls rather than firing residues. This molten mud has dripped from the roof arches to form 'stalactites'.		
River defences	Terraced stone walls lining the Harī Rūd, over 950m east of the minaret.	150m long; walls stand 2.7m high and over 2.3m thick in places; a semi-circular buttress was also found, measuring 2.7 x 1.5m and 1.8m high.	Constructed out of medium-large stones, averaging 1.0 x 0.47m in size, with rocky fill forming the core of the wall, behind a carefully laid external wall face.
Watchtower (eastern)	415m east of the minaret; a large number of sherds and eroded baked-bricks were found at the base of the cliffs surmounted by the tower.	Too dangerous to reach in 2005	
Watchtower (central)	The tower has a stone base which appears to be built directly on bedrock, with some twigs and sticks included in its 'footing'. At the northern end, a room overlooks the Harī Rūd; the room's internal wall has a narrow doorway in the south leading to a corridor, which heads west before turning to the south again.	It is difficult to estimate the original diameter and height of the tower, due to its precipitous location and incomplete preservation, but the mud-brick part of the wall seems to have been 80–90cm thick, at its base. The internal wall stands over 1.7m high.	The south face of the tower is the best preserved, with 11 courses (1.6m) of medium-sized stones lying roughly horizontal; mud and small stones fill the cavities. 15 courses of mud-bricks (averaging 30cm long and 8cm thick) were laid on top of the stone base, separated by 4–5cm thick layers of mortar, and a further five courses of stones on top of the mud-brick. The internal wall consists of 10 courses of rough, medium-sized stones averaging 16 x 18 x 22cm; it has many cavities and some mud mortar.
Watchtower (western)	Sub-circular; smaller and less complex than the central watchtower. The entrance seems to have been from the south.	Internal dimensions of 4.5 x 4.1m. 16 courses of the stone wall survive in the south, standing approximately 2.5m high	Roughly constructed of angular, medium-sized stones (averaging 28 x 18cm). The mortar consists of mud, small stones and quite a lot of organic material (mostly twigs).