

## Résumé

Fortifications of any form and size play a major role in Afghan architecture. From isolated watch towers or rectangular individual buildings to complex fortified structures with several enclosing walls nested into one another, from numerous smaller or larger farmsteads to the citadels located in elevated positions in the towns and villages, surrounded again by massive walls (Figs. 500–505)<sup>1</sup>. The first impressions upon the beholder of these structures are: 'protection' and 'defence'. Even simple mudbrick dwellings in the plain of the Hari Rud river are located behind two-metre high walls made of mudbricks and/or *pakhsah*, nowadays more frequently of cement, thus remaining hidden to outsiders.<sup>2</sup>

The diversity and sheer quantity of historical fortified structures<sup>3</sup> is not represented in any form in scientific bibliographies: while summaries/overviews on the architecture in Afghanistan put emphasis on the form and decoration of mosques, *madrasas*, minarets, caravanserais, *ziarats*, *khaneqas*, or gardens, also treating towers, citadels and city walls, comprehensive works and analyses on fortification architecture still remain a desideratum.

The aspects complicating the attempt of establishing a comprehensive canon of fortified structures – apart from a unclearly large number of fortresses – are:

- the 'natural' individuality of the structures, the ground plan of which is usually adapted to the topographical conditions – thus *per se* differing significantly in structure and function: single towers, extended watch towers, inhabited towers (*donjons*), individual castles through to extensive fortified complexes, and, in particular, another type of fortress, the urban citadel with most diverse access systems, one of which is represented by the Timurid gate complex of Qala'-e Ekhtyaruddin;
- the choice of building materials, which must obviously have been materials characteristic of the region. In areas where stone elements were rarely used ramparts were built of *pakhsah* and vice versa, resulting also in purely technically determined differences in building details and decoration;
- different priorities in, for example, the structure and use of a citadel: fortified areas in towns or cities ('citadel' as diminutive form of 'city') have existed since early history, either for protecting the residences of local rulers, or groups of palaces and mosques, or as a city within a city with mosques, cisterns, granaries, living quarters, others with mainly a single garden pavilion or other buildings for exclusively military purposes;
- the continuation of centuries-old previous structures;
- as well as, at short intervals, execution of necessary repair and maintenance work, especially for the mud structures, but also the necessity of continuous adaptation to the contemporary technique of warfare, resulting in frequent reconstructions, alternations, and even relocations.<sup>4</sup>

<sup>1</sup> Franke/Urban 2018.

<sup>2</sup> 'After the 10<sup>th</sup> century, hardly a town of any significance ... (in the region) ... existed without fortified walls, mighty towers and elaborate gates' (Grabar 1978, 67).

<sup>3</sup> 'In the Bamiyan Valley alone a very large numbers of small forts and towers existed throughout the valley, many of them decorated with impressed lozenge patterns, forming a very sophisticated system of fortifications guarding the valley at the time that it formed a small Ghurid state before the Mongol invasions' (Ball 2008, 166).

<sup>4</sup> Knobloch 2002, 48.

## Excavations

Through the excavations in the Trench-3 area the existence of an elaborately designed gate complex north of the citadel of Qala'-e Ekhtyaruddin could be proven, enabling its reconstruction in structural composition and architectural details. Before this evidence of excavations in Trench 3 was excavated, only one room and one tower were known of this structurally independent gate complex.<sup>5</sup> The excavation results attest to several independent building phases:

No architectural evidence could be assigned with certainty to the period before the early 15<sup>th</sup> century. The only structure in question is a fired-brick wall beneath the southeastern outer wall of the gate complex, built of square bricks and clay mortar, however, with slightly deviating orientation (Fig. 459). Although it cannot be excluded that this lower wall belonged to an older building, it is much more likely that it was part of a building which was or had to be modified during construction, i.e. as a consequence of subsidence caused by the unstable subsoil. This might also have been the reason that the building components resting directly upon this older wall were founded more firmly by use of foundation beams. As with the two corner towers of the gate complex these are stabilising measures for the – obviously inevitable – adjustment of the building technique, since these foundation beams are usually laid into the lowermost layers of the foundations and not several metres above.

The oldest evidence (Architectural Phase 1) is the Timurid gate complex (Figs. 376; 506), an external, independent architectural unit with trapezoid ground plan, two walkable round corner towers, a wide pointed-arch gate in the central axis, as well as three (verified) lateral accesses. The outer surface of the gate complex was intricately decorated in colour, and also inside equipped with special architectural details as, i.e., a large pointed-arch niche.

North of the citadel, in front of the central gate, a (fired-) brick-walled bridge led over a moat. Access was provided via a bent gateway leading subsequently upwards. It was broad enough to

<sup>5</sup> van Eenhoge 1981.



Fig. 500 Qala'-e Sarkari, Obbeh district. Gateway



Fig. 501 Qala'-e Sukhte, Guzara district. Gateway (left)



Fig. 502 Qala'-e Chawni, Chesht-e Sharif district. General view



Fig. 503 Qala'-e Baghni, Injil district. Corner tower



Fig. 504 Bigal, Obbeh district. Fortified town buildings



Fig. 505 Qala'-e Mirza 'Ata, Pashtun Zarghun district. Town building

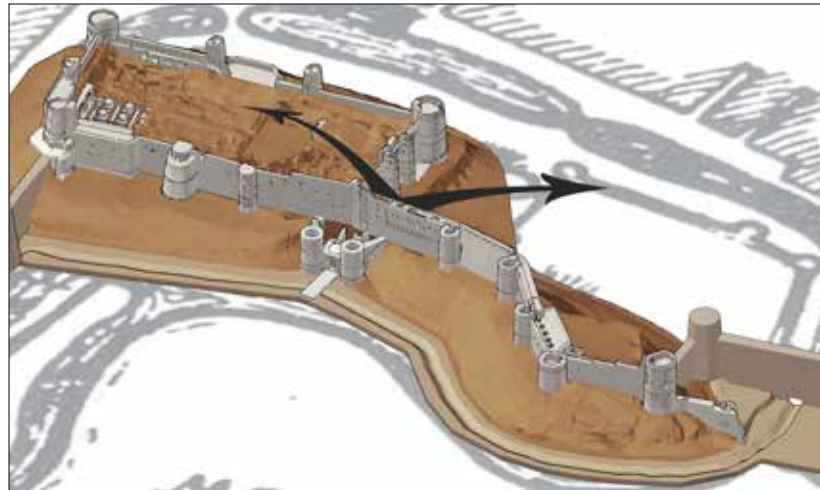


Fig. 506 Isometrical view of the Timurid gateway and the layout of the citadel walls at Architectural Phase 1 (schematic, the architectural details correspond to today's appearance), view from northwest

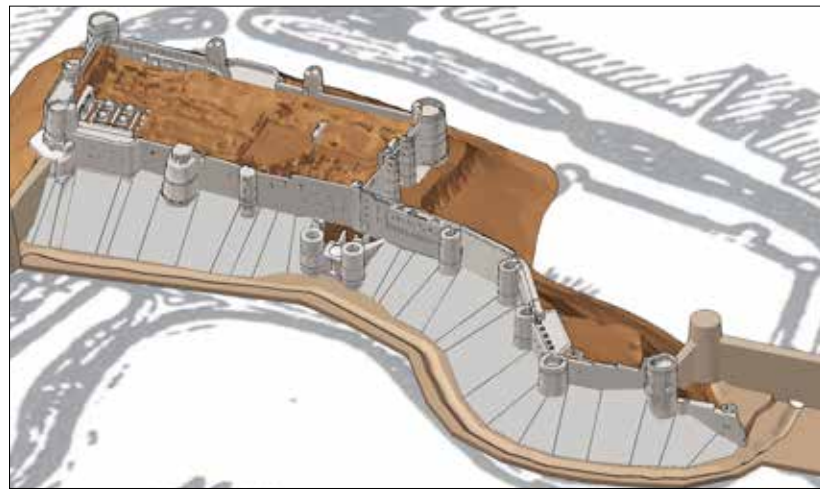


Fig. 507 Isometrical view of Qala'-e Ekhtyaruddin and the Timurid gateway at Architectural Phase 2 (cp. Fig. 506)

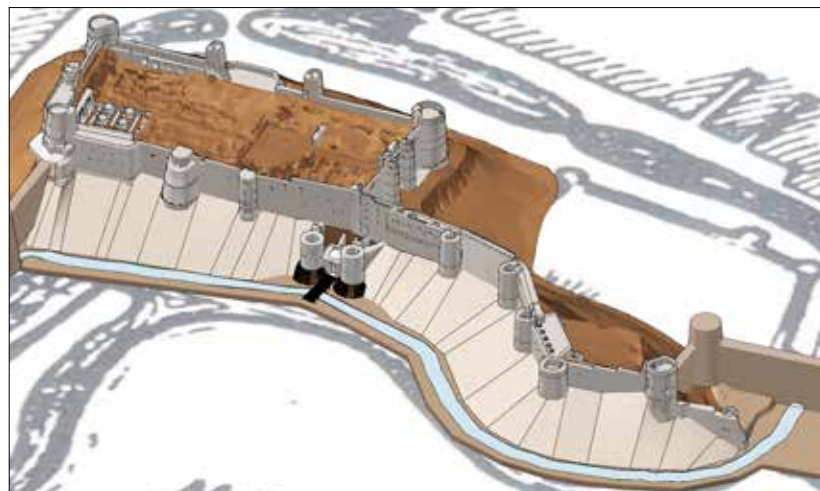


Fig. 508 Isometrical view of Qala'-e Ekhtyaruddin and the Timurid gateway at Architectural Phase 4 (cp. Fig. 506)

be entered, for instance, also on horseback. Also smaller carts can have passed the access easily, whereas a use by horse-drawn carriages or by larger crowds of people, in contrast, must have been rather difficult.

While the structural details of the gateway could be clarified archaeologically, the appearance of the area actually accessed beyond it has to remain open. It is only established that the gateway offered access to the inner city of Herat as well as to the elevated citadel (Fig. 506). The latter was located to the east of the gateway, while to the west only a single but massive wall was leading towards the Timurid Tower; there another elevated, but very small area might have been walled-in (Figs. 506–508).

At a later date (Architectural Phase 2), the function and overall appearance of the complex were essentially altered. The entire northern slope of the citadel was levelled to create a largely constant gradient and reinforced with a massive glacis using stone slabs (Figs. 377; 507). With this measure it was also accepted that from this time on all lateral accesses of the gateway were blocked and smaller parts of its towers' decoration covered.

Later, the stone glacis was renewed by a paving of large-format fired bricks (Architectural Phase 3), having become necessary presumably because parts of the stone glacis have not withstood the lateral pressure of the slope.

The gate complex stayed in use and was further reinforced (Architectural Phase 4 (Figs. 379; 508). Parts of these building measures rest on the fired-brick glacis and were therefore built after its construction. These are primarily additional casings around the lower parts of the two gate towers, to a large extent below street level in the moat area. Through the use of lime mortar in the lower part of the gate complex – in contrast to the clay mortar used in the preceding phase – the building was adjusted to the occasionally floated moat. The transformation of the bridge foundations – that had originally been built with clay mortar – into a wooden construction took place in this building phase as well. It should be presumed that at this stage the entire bridge was made of wood.

At a date that cannot be chronologically specified in detail, the citadel's northern gateway was abandoned and allowed to deteriorate.

What follows is a phase as a ruin. Since from the archeologically examined areas almost no structural debris (bricks, worked stone, etc.) of the former complex itself was retrieved, but rather cultural debris from the upper parts of the citadel, the gate complex probably served as supplier of 'recyclable' building material shortly after its abandonment. The only new structures that were added during this phase of abandonment might be two walls in the southeastern part of the complex (inside Room 6, Fig. 380; Architectural Phase 5).

The latest building measures in the gateway area (Architectural Phase 6) took place in connection with the (re-)construction of the citadel wall and the building of Tower XVIII, projecting approx. in the middle of the northern citadel wall.<sup>6</sup> Then, and for this purpose, the preserved part of the former southern central room of the gate complex was filled and the associated pointed-arch gate carefully walled-up from within. In the two rooms at both sides of the tower retainment walls were built in a characteristic herringbone pattern, just like another massive brick wall in the former southeastern room, serving for underpinning and reinforcement of the subsoil for the northern citadel wall and Tower XVIII (Figs. 381; 509).

Dated even later is a narrow mudbrick wall (Figs. 480; 481) built in front of the upper section of the large pointed-arch niche in the former southeastern side room, creating an only a few square metres small room, used temporarily, at best.

### The Original Timurid Building

The Timurid gate complex on the northern slope of the citadel in Herat differs in many ways from the entrances to fortified areas of comparable towns in the region.

One of these differences is the position of the gate oriented to the opposite side, away from the city centre (Fig. 510). According to contemporary sources<sup>7</sup>, Shah Rokh, who had this complex renewed, resided elsewhere, when he was not campaigning with the army, possibly also in the *Bagh-e Shah*, a walled garden with a

<sup>6</sup> Restored 1977–79 by Unesco.

<sup>7</sup> Cf. Noelle-Karimi 2014, 21.

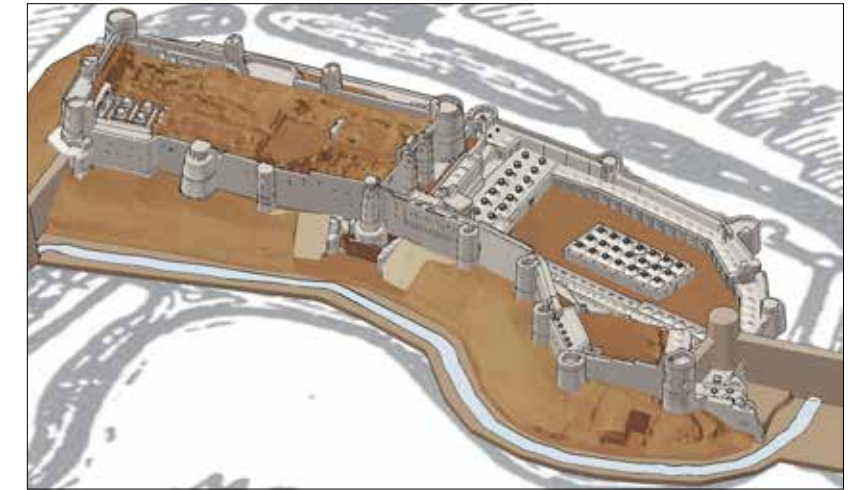


Fig. 509 Isometrical view of Qala'-e Ekhtyaruddin and the Timurid gateway at Architectural Phase 6 (cp. Fig. 506)

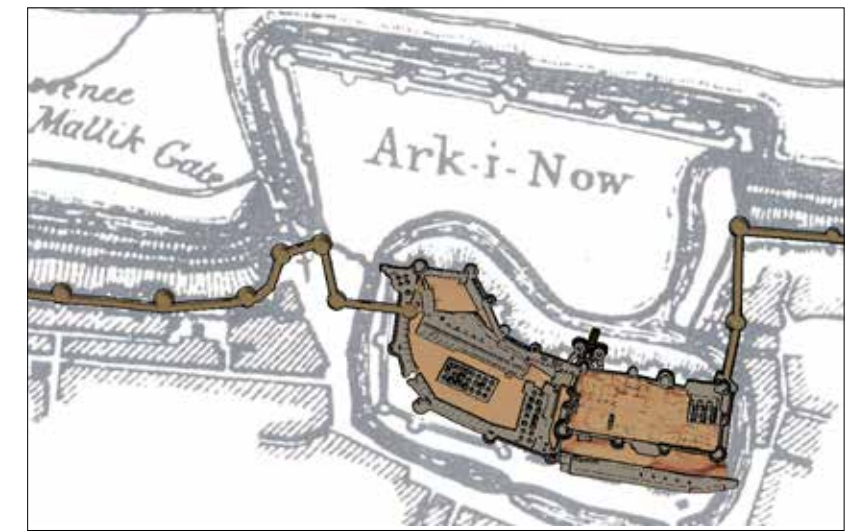


Fig. 510 Projection of the Timurid gateway and the bridge over the moat onto the Herat plan of 1840 by Cpt. Sanders (after Bruno 1981, Fig. 1)

mosque in the north, outside the city centre, the area of the later *Ark-i Now* (Fig. 510). Not only a palace, but also a royal mosque and a *khaneqah*, stood on that ground already as early as the 14<sup>th</sup> century.<sup>8</sup> The area was situated outside the city, probably also protected by a wall and/or moat (Fig. 510, cp. Fig. 532). Therefore, initially the original gateway must have been used predominantly by the inhabitants of this residence in the north and was rather not accessible to the urban public.

In this context the decorative design of the Timurid gate complex for representative purposes is also gaining importance, since it can be assumed that its elaborate decoration was meant to refer to its special function, as it were, of a 'representative gate'. The decoration (Figs. 321–323; 397–400) combines functional elements, as i.e. the protective tower base covered with sandstone slabs, and the simple but noticeable offset enlarging the diameter

<sup>8</sup> Franke 2015b, 74, after Allen 1983, Fig. 2; Gaube 1976, 227 Map 1.



Fig. 511 Herat Citadel. Northwestern Corner Tower (Timurid Tower), from northeast



Fig. 513 Tower of contemporary fortified settlement (*qala*) in the Hari Rud valley



Fig. 514 Gateway of fortified settlement (*qala*) in the Hari Rud valley



Fig. 512 Yazd, Town Walls, rebuilt 14<sup>th</sup> CE (Hutt/Harrow 1978, Pl. 112)

of the tower caused by the 'dog-teeth' frieze, with the glossy colours of the surface decoration of glazed bricks in white, turquoise and dark blue.

Unfortunately, through the following building activities and alterations in and around Qala'-e Ekhtyaruddin it can no longer be determined where else on the Timurid citadel this decoration had originally also been applied. Based on the current state of knowledge only the westernmost Tower XIV (Timurid Tower) was equally elaborately decorated (Fig. 511); for another part of the citadel solely the sandstone frieze is mentioned.<sup>9</sup> Although today heavily restored, the decoration on the Timurid Tower is proven by historic photographs and written sources; the same applies for other elements like a decorative band along the perimeter wall.<sup>10</sup> References of decoration on other towers, in contrast, are lacking so far – just as there is only an indirect mention of the Timurid gate complex itself.<sup>11</sup>

In contrast to religious architecture, enclosing walls, towers and gates of historical as well as present complexes of the region are mostly not decorated with coloured bricks<sup>12</sup>; only the larger towers of the city walls, pigeon towers or the more extensive *qala*'s show ornamentation – composed e.g. of staggered rows of mudbricks

<sup>9</sup> Van Eenhoge 1981, 20.

<sup>10</sup> Lézine 1980, 132. – Van Eenhoge 1981, 21.

<sup>11</sup> Cp. Résumé on p. 750.

<sup>12</sup> With the exception of inscriptions (O'Kane 1987, 15), see also O'Kane 1987, 59–74 (decoration).

(Fig. 513) – thus emphasising their expression of pride and wealth, obviously created through the height and uniformity of the walls with large open spaces in front.

Besides purely functional aspects fortifications and their architectural details tend to even intensify this expression of physical power<sup>13</sup>, so that it can easily be imagined that in fortress architecture individual elements, as e.g. *machicolation*<sup>14</sup> or battlements were continued to be built only for their visual impact without fulfilling their original role. Thus, it is probably no coincidence that the architectural complexity as well as the elaborate decoration, were not applied throughout the entire Timurid fortress of Qala'-e Ekhtyaruddin, but on only two structures with prominent location and function.

Location and position of the Timurid gate complex itself, in contrast, are not unusual. External, free-standing gate complexes outside and below the castle or citadel proper are an integral part of Late Mediaeval fortresses. They are deviating from fortifications with 'direct' passages (in the enclosing walls), such as occurring in Afghanistan and Iran either as simple passages in fortified buildings (*qala*') or caravanserais (Fig. 514), as fortresses, such as e.g. Bala Hissar in Kabul (Fig. 515), or as rectangular, multi-room parts of buildings integrated into the outer walls.

External gate complexes show advantages with respect to aspects of defence since they are situated in front of the actual entrances leading into the outer walls or buildings, thus representing an additional control and defensive factor of the overall construction. In every fortress the gate(s) is/are the most sensitive area(s). With regard to protection it is therefore necessary to reduce the number of gates to an absolute minimum<sup>15</sup>, and, at the same time, spend much care on the execution of their construction. Regardless of their different archi-

<sup>13</sup> Aply on the relation of power and monumental architecture: Grabar 1978, 65–66.

<sup>14</sup> A *machicolation* (French: *mâchicoulis*) is a floor opening between the supporting corbels of a battlement, through which stones or other material, such as boiling water or cooking oil, could be dropped on attackers at the base of a defensive wall (Fig. 512).

<sup>15</sup> There is no structural evidence of more than one citadel gate – as mentioned by historic sources (cp. p. 462)



Fig. 515 Kabul, Bala Hissar Gate, 1879-80 (phototeca afghanica, RE 058)

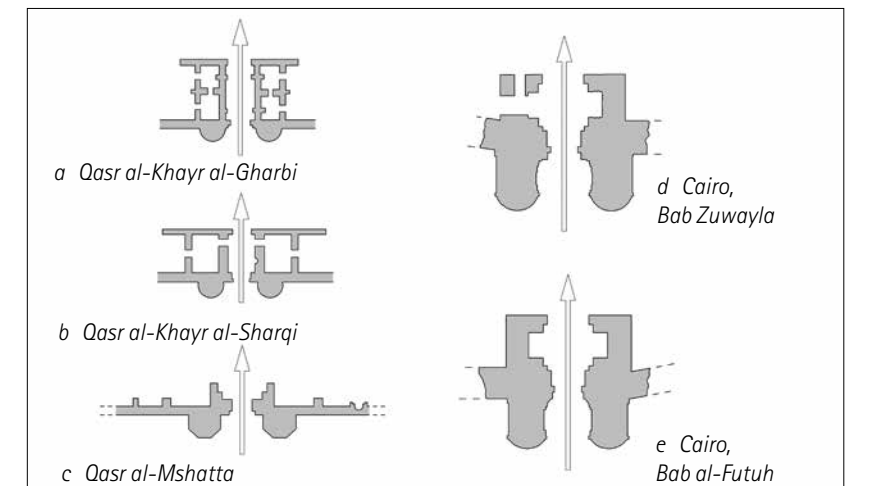


Fig. 516 Ground plans of straight entrances of selected castles (a-c) and city walls (d-e), schematic drawing

tectural details, the historical gate complexes can be subdivided into two types of ground plans:

The simpler type is represented by the so-called straight gate, a direct or axial-symmetrical passage through the wall and several rooms along or inside the wall (Fig. 516).

The bent gate, in contrast, is obviously of more defensive structure, a complex of mostly several rooms with a once or several times bent axis of the access, also referred to as 'entrée coudée' or 'dog-legged entrance', in various executions (Fig. 517).<sup>16</sup> According to its ground plan the Timurid gateway belongs to the group of so-called 'bent-entrance' gateways.

Both types simultaneously trace back to different predecessors in history and prehistory, even if individual building historians rather advance the assumption of historically changing schemes of development. Thus, for the development of forts and fortresses e.g. in the Levant a chronology from direct

<sup>16</sup> Yovitchitch 2008, 110.

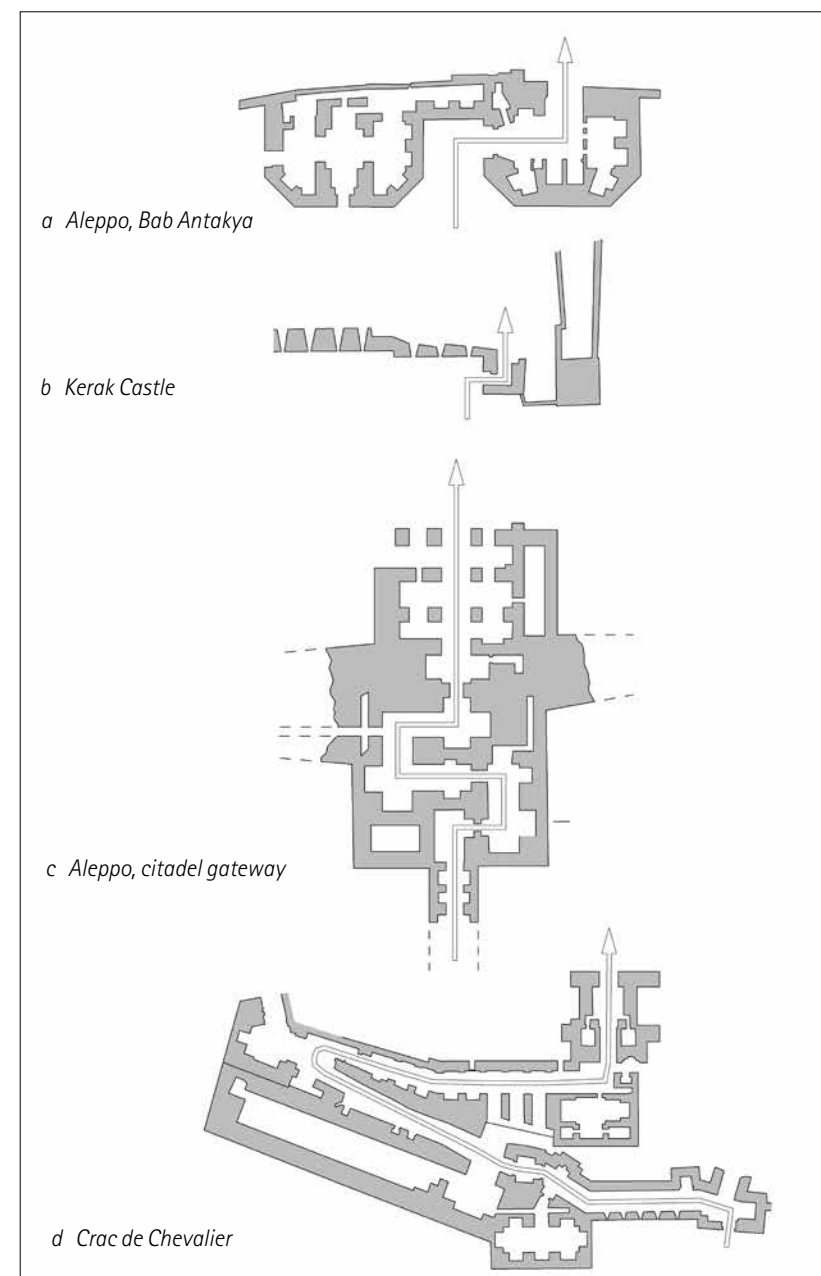


Fig. 517 Ground plan of bent entrances of selected city walls (a) and castles (b-d); schematic drawing

accesses to bent entrances is assumed – regardless of the actual function of the building: From the early days of Islam, to the middle of the 12<sup>th</sup> century, the direct access between two towers was the common type, as e.g. in the desert castles of Mshatta, Qasr al-Khayr al-Sharqi or Qasr al-Khayr al-Gharbi, or the double-tower gates in the city wall of Cairo from the end of the 11<sup>th</sup> century (Fig. 516d; e), as well as in the Seljuq citadel (after 1076) in Damascus.<sup>17</sup> The most basic form of a bent-entrance gate is the lateral entrance into a gate tower, as in the case of the 'Bab Antakia' in the city wall gate at Aleppo (Fig. 517a). In castle architecture the bent-entrance type prevailed, from this lateral tower entrance

17 Biller 2006, 224–228.

to a long vaulted access at Crac de Chevalier<sup>18</sup>, to a sixfold change of directions in the gate complex of the citadel in Aleppo (Figs. 517c; 524).

In the vicinity of the area of operation parallels for both gate types from different periods can be found.<sup>19</sup> For Herat in Timurid times there is also mention of contorted access leading through the city gates, a zig zag-shaped alley ('camel's neck').<sup>20</sup> However, apart from aspects regarding the defence system there is still another important reason for the construction of a bent-access solution at the Timurid gate complex in Herat, namely the topographical conditions, that is the necessity to overcome height differences of c. 13 m between (today's) ambient level and the floor level of the citadel. A direct access up the steep slope is not possible – at least for any kind of vehicle and draught animal or mount. In case of the Timurid gate complex the difference in altitude between gate and the interior of the citadel must be the main reason that determined the building of the slanted and bent access to the citadel. Thereby the height difference is overcome via a longer zigzag path with low gradient, which was probably protected by the walls. Due to the position of the gateway to the northwest of the original citadel mound it is conceivable as well, that the passage originally lead in the first place into an open space where today the 'lower' citadel is located.

On 19<sup>th</sup>-century watercolours showing the city wall of Herat several gateways are depicted of which the outer gate is located separately below the actual city walls (Figs. 520; 521). An illustrative comparison for the gate complex of Qala'-e Ekhtyaruddin is represented by the southern gate in the city wall of Bam (Figs. 518; 519), even though the latter, in its destroyed 1988-condition, dates into the beginning of the 20<sup>th</sup> century.

18 At the Crac (final state of development under the Mamluks, end of the 13<sup>th</sup> century), the castle was entered through a passage in the outer wall and a path along the inside of the outer walls led up to the higher situated inner fortress; today, the way leads through a tower at the outer wall, then outside along the wall into another, larger, later-added wing (extended outer bailey) and only then into the castle's inside. The largest part of this access is also vaulted.

19 Bent-entrance also in Qala'-e Nau or Noken Kalat (Nimruz province), an Islamic fortress connected to a probably pre-Islamic tower (Ball 2008, 258 Fig. 45).

20 See Samizay 1981, quoted by Noelle-Karimi 2014, 23.



Fig. 518 Bam, southern gateway (Hutt/Harrow 1978, Pl. 108)

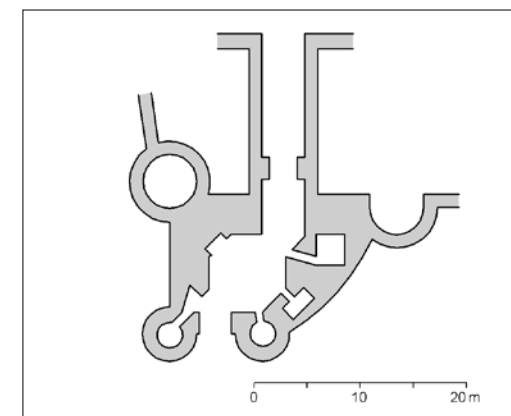


Fig. 519 Bam, southern gateway, ground plan, schematical, after Hutt/Harrow 1978, Pl. 109a

Both examples show double-tower constructions outside and beneath the actual walls with slanted, gently ascending but protected accesses.

An only seemingly similar impression is created by the western access to the citadel of Qala'-e Fath in the province of Nimruz (construction: mostly mudbrick, 'Timurid', 15<sup>th</sup>/16<sup>th</sup> century).<sup>21</sup> As visible in the photograph (Fig. 522), access is provided via a gateway leading from beneath the citadel walls just into the outermost of three enclosing walls, while the interior of the citadel was entered through a ramp protected by a mudbrick wall and a lateral access leading to a rounded projection in the western inner wall (Fig. 523).

21 Ball/Gardin 1982, 206 No. 842.



Fig. 520 Herat, Iraq Gate (western city gate), watercolour by E. Durrand 1885



Fig. 521 Qepshaq Gate (the eastern of the two northern city gates), from northeast<sup>20</sup>, cp. Fig. 535. Watercolour by E. Durrand 1885

## Reshaping the Timurid Gate Complex – from Representation to Fortification (Architectural Phase 2)

With the construction of the glacis the appearance of the gate complex was substantially changed. Its lateral accesses became obsolete; the impression of defensibility of the massive glacis became stronger than the impact of the decoration. While the original gate complex must be imagined as a building with its colour scheme standing out from its surroundings, much of this appearance must have got lost within the mighty stone glacis. Henceforth the impression of defensiveness was foregrounded, characterised by the glacis made of large, oblong stone slabs, a material rarely used in Timurid architecture.<sup>23</sup> Its

22 The drawing has been occasionally identified as the eastern gate (Kuskh Gate), but the prolongation of the walls belong to the northern city walls (cp. Fig. 535). The mountains in the background are visible on photographs to the west of the city.

23 O'Kane 1987, 60. Stone slabs were used e.g. on the base friezes of the towers.