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Castles, Walls, Fortresses. The Sasanian Effort to Defend the Territory

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Abstract: *Defensive structures have been applied as the permanent elements of the Iranian urbanism, from the first phases of sedentism in the Neolithic period onwards. Following the Iranian tradition in architecture, Sasanian fortifications having local features were constructed in adaptation with the regional circumstances. Nevertheless, we can find some similarities in the components of the defensive installations. The defensive structures located within the Sasanian territory turned Iran into the unconquerable fortress providing Sasanians with military, political, cultural, and economic dominance over a vast area of the ancient world for more than four centuries.*

Key words: Fortress, Defensive Fortifications, Sasanian Period, Iran, Linear Walls

Introduction

Castles and defensive buildings have been playing an important role in the Iranian history of architecture. As an architectural tradition, almost all the historical settlements in Iran have been enclosed by the massive walls which were occasionally equipped with watchtowers and forts and because of the defensive appearance of the settlements, the modern Iranian villagers call still their settlements ‘Qal‘eh’ meaning castle in Persian. Due to the continuous tradition of defensive architecture over history, it is difficult to apply comparative methods to estimate the date of enclosing or linear walls, towers, and forts. On the other hand, the defensive structures were commonly erected over the ruins of ancient structures and therefore includes the various portions dating back to the different phases. Nevertheless, the historical process has caused some common styles in masonry, spatial organization, form, decoration, and other architectural characteristics of a given cultural period.

Geographical condition of the Iranian plateau explains the basics of the formation and development of the different forms of architecture. The Iranian buildings have been affected in both structure and form by the climate and geography

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of the Iranian plateau. Accordingly, the buildings in the mountainous region were constructed with stones and those which were established in the plains with bricks. Geography has also affected the form and function of the architectural features in accordance with the lifestyles of pastoral nomadism and/or agricultural sedentism.

In contrast to the Sasanian palatial architecture which follows an almost homogenised pattern, the defensive constructions of the same period were diverse in form and structure. Accordingly, it is impossible to suppose a comprehensive formula for the Sasanian defensive architecture defining a unique form and plan for all of the Sasanian fortifications. We, however, shall review the defensive landmarks of the Sasanian Iran and endeavour to extract an appropriate pattern which was followed by the Sasanian architects in the different regions of this extensive territory.

A glance on the pre-Sasanian defensive architecture of Iran

Due to the special geographical setting of Iran, this plateau has steadily been involved in an outstanding dispute between pastoral nomads and settled people from the Neolithic period onwards. The nomadic people of Iran, following seasonally available resources, travelled regularly through the vast steppes and plains. Due to the prolonged droughts which happened periodically, nomadic pastoral tribes had no way except looting and plundering the settled peoples who were living in villages and cities. As a reaction to the expected invasions, the Iranian inhabitants constructed the huge fortifications around their settlements and established isolated towers and forts to control the roads and borders. Dating back to the 5th-6th millennium BC, the enclosure of the Neolithic settlement of Kara Tepe some 40 km to Tehran is one of the oldest Iranian ramparts which has been ever identified. The Kara Tepe's wall 1.20 metres in width was constructed with pisé and its length has not ever been identified. Another Neolithic enclosure about 4 metres thick was constructed with mud brick has been unearthed at the ancient mound Sialk in the central Iranian plateau¹.

¹ MALEK SHAHMIRZADI 1385/2006: 63-64.

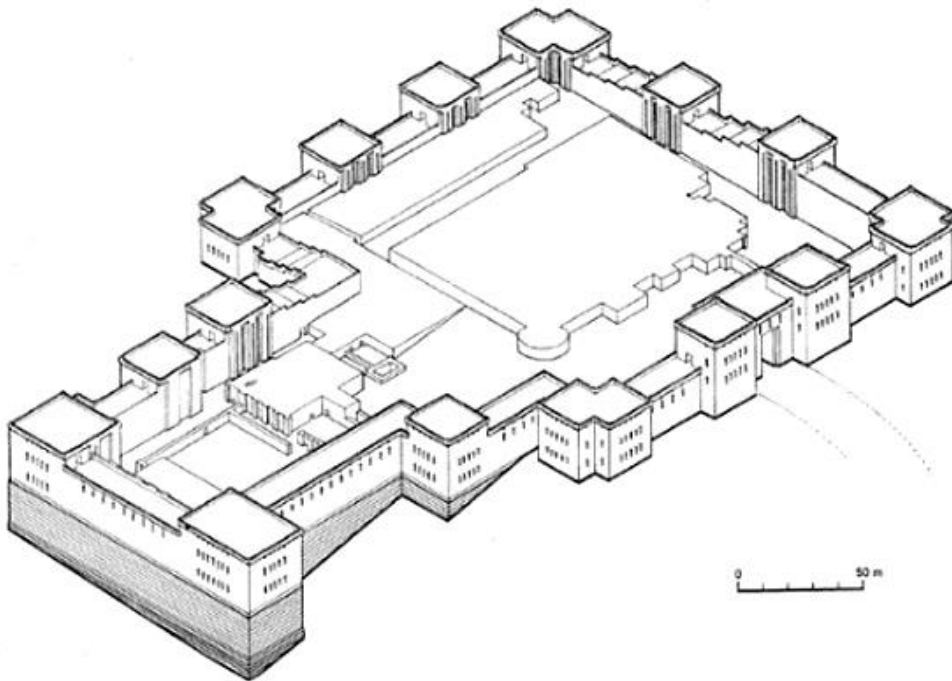


Fig. 1. An axonometric reconstruction of Tall-e Takht (after STRONACH 1978)

During the historical period and the formation age of the powerful governments in Iran, the fortifications enjoyed the support of the Iranian states. The Iranian villages and cities, especially which were located on the borderlands, were equipped with the fortifications against the northern nomads and the western opponents. According to the Assyrian reliefs, the Median fortresses located on the high mounds and/or artificial platforms were enclosed by walls with gates and watchtowers². Some archaeological excavations carried out at the Median sites of Tepe Nūš-e Jān³, Godīn Tepe⁴, Tell Gubba⁵, Ulug Depe⁶, and Tepe Ozbaki⁷ have testified to the characteristics of the Median castles which were recorded in the Assyrian documents. Similarly, some defensive elements including unpassable ditches, massive ramparts, and the gates flanked by gigantic towers have been identified in the Achaemenid constructions concentrating on the borderlands of Chorasmia and Transoxiana⁸. Due to the political security during the Achaemenid period some settlements, like Dahan-e Ġolāmān, were established without any

² GUNTER 1982.

³ STRONACH 1968.

⁴ YOUNG 1969.

⁵ FUJII 1981.

⁶ BOUCHARLAT et al. 2005.

⁷ MADJIDZADEH 1389/2010.

⁸ e.g. NEGMATOV 1996; BELENITSKY 1969; HELMS et al. 2002; KHOZHANIYAZOV 2006.

enclosure⁹. Nevertheless, the important royal residence of Persepolis was surrounded by massive fortifications¹⁰ and the impressive castle of Pasargadae namely Tall-e Takht functioned as a royal storehouse was guarded by castellated walls¹¹ [Fig. 1].

Establishing the fortifications to defend the settlements continued into the Parthian period well exemplified with the fortified capital city of Nisa. The Mithradātkert castle in the centre of the old Nisa was mounted a natural hill embraced by a mud-brick wall which was equipped with consecutive towers¹². The identified Parthian settlements of northeastern Iran including Kojne Kala, Geok Tepe, Kyrk Tepe, Göbekli Tepe, Chichanlik Tepe, Durnali, Chilburj, Dev Kala, Kishman Tepe, and Jin Tepe were built in the shape of a rectangular and their enclosing walls were strengthened with the rectangular buttresses which were surmounted by small rooms for watchmen¹³.

The dawn of the Sasanian fortifications

The powerful motives which led to establishing the fortifications in the Achaemenian and Parthian periods continued into the Sasanian period. The Iranian settlement in the Sasanian period was continuously threatened by the nomadic raiders and powerful Roman armies. Moreover, the permanent clashes between settled and nomadic peoples of the Iranian plateau forced the Sasanians to fortify the settlements. The hometown of Sasanians, Eṣṭakhr which flourished from 265 BC to AD 200 functioned as the capital of the Persis kings¹⁴ became the centre of Sasanian rebellions against the last Arsacid king Ardawān IV (r. 216-224). Ernest Herzfeld's excavations at the outer edge of Eṣṭakhr revealed part of an enormously strong wall with round towers and short curtain-walls between was constructed with mud bricks. He reports five stories of recessed loopholes preserved on the façade of the wall¹⁵ [Fig. 2].

Ardašīr I (r. 224-242) the founder of the Sasanian monarchy organized his campaign against the Arsacids from a castle which was established in the mountains of Fīrūzābād. The castle so-called Qal'eh Dokhtar was erected on the cliffs 140 m high, overlooking the road leading to the Fīrūzābād plain. Qal'eh Dokhtar was a complex included a fortress which was embraced by several buildings and enclosed by a massive enclosure with two parallel walls¹⁶ [Fig. 3]. Several short curtains connected the parallel walls together and some semi-circular bastions serving as watchtowers were abutted to the outer wall.

⁹ SAJADI 1376/1997: 39.

¹⁰ SCHMIDT 1939: 7-11.

¹¹ STRONACH 1978: 146-159.

¹² PUGACHENKOVA 1958: 32-36.

¹³ see JAKUBIAK 2006.

¹⁴ BIVAR 1998.

¹⁵ HERZFELD 1941: 276.

¹⁶ HUFF 1976.

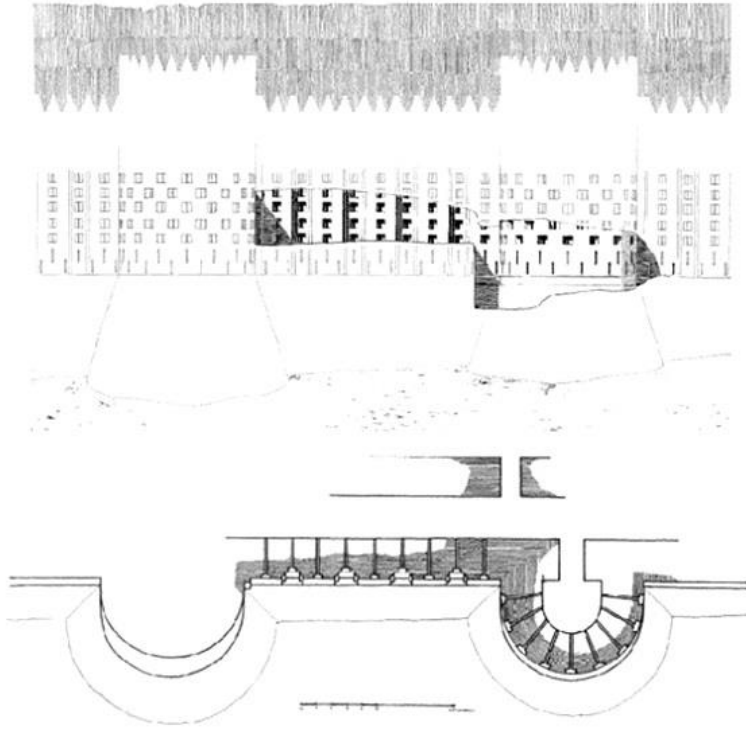


Fig. 2. Plan and Elevation of the Eṣṭakhr's enclosing wall (after HERZFELD 1941)

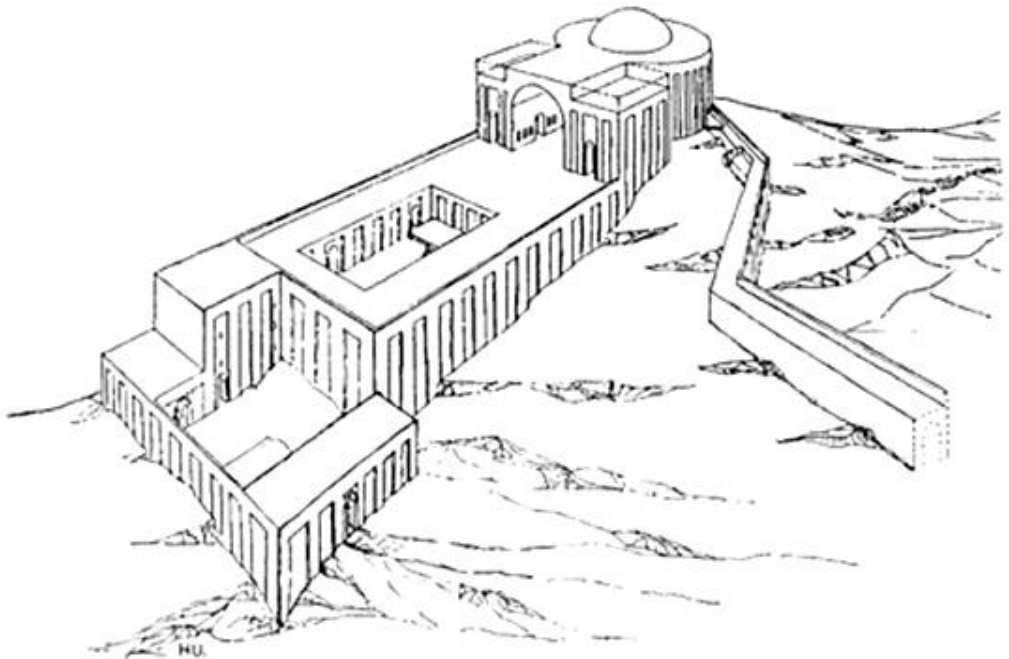


Fig. 3. A reconstruction of the castle of Qal'eh Dokhtar, Firuzabad (after HUFF 1993)

Ardašīr-Khorra as the first city which was founded by Ardašīr I in the Fīrūzābād plain was overlooked by the Qal‘eh Dokhtar. This circular city was enclosed by two parallel clay walls which inner one was about 10 m thick. The wall was surrounded by a ditch 35 m wide and pierced by four gateways located at the four different directions. The central quarter of the city containing governmental buildings was also embraced by a circle wall¹⁷ and therefore it seemed impossible for invaders to access the heart of the Ardašīr’s residence.

Monitoring the ways and settlements

The gorges and the connecting passes were monitored by the mountain installations. During the reign of Šāpur I (r. 240/42-270/72) a citadel was constructed on the route into the city of Bīšāpur in which a massive fort was erected at the highest level above a cliff platform and was flanked by two corner circular towers. Two semi-circular towers decorated with blind windows were also established between the corner towers¹⁸.

The favourable location of a fortress in the Sasanian period was a place overlooks both the main pass and the important settlement at the same time. According to this pattern, a fortress in Bazeh Hur valley so-called Qaṣr-e Dokhtar was established on the road of Khorasan-Sistān. Qaṣr-e Dokhtar monitored the road and two colossal Chartaq date back to the Sasanian/Early Islamic period. The upper Chartaq was embraced with a massive mudbrick wall which was supported with the stone buttresses on the northern side. A linear mudbrick wall about 300 m long runs from the southern corner of the upper Chartaq on top of a mountain ridge to the south. This wall served in fact as a path between the northern and southern parts of the Qaṣr-e Dokhtar fort. The southern area of the fort was furnished with at least two towers served probably as watchtowers. At least 8 watchtowers were built along the liner wall with mud bricks on the stone foundations [Fig. 4].

¹⁷ HUFF 2008: 49.

¹⁸ GHIRSHMAN 1971: 37-40.

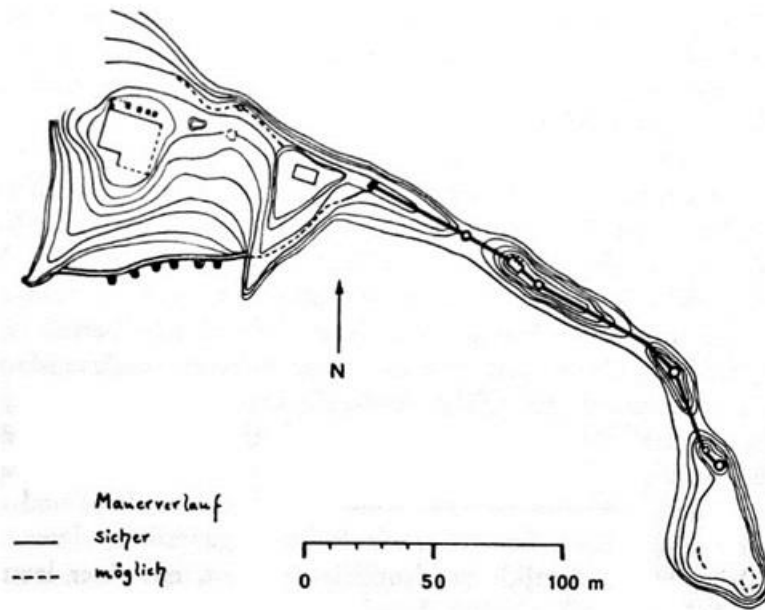


Fig. 4. Topographical map of Qaṣr-e Dokhtar fort (after HALLIER 1975)

In defence of the territory

Due to the extension of the Sasanian empire, protecting the borderlands became a critical challenge of the Sasanian monarchs. According to the Šāpur I's inscription at Ka'be-ye Zartošt, the Iranian borders stretched eastward to the Sind and westward to the Euphrates¹⁹. The Sasanian borders determined their front lines against the hostile neighbours including the Romans from the west, raider nomads from the north and east, and Arab tribes from the south and south-east. In response to these threats, the settlements which were located in the borderlands were equipped with defensive fortifications and supported with the forts which had occasionally capacity for thousands of people. The different divisions of the populated centres were surrounded by enclosures and ditches. The most important quarter of the Sasanian cities including the *arg* (namely citadel) continued to function as governmental part of the Iranian cities during the Islamic period.

Eastern fortifications

The fortresses and citadels in eastern Iran including Chilburj, Durnali [Fig. 5] Chichanlik Tepe, and Kyrk Tepe which were constructed during the pre-Sasanian

¹⁹ SPRENGLING 1953: 14.

periods were restored and reinforced in the Sasanian period²⁰. Situated in the middle of the residential area, these fortresses were mounted a natural or artificial hill and occupied by the military forces who were protecting the settlement and oases against the steppe raiders.

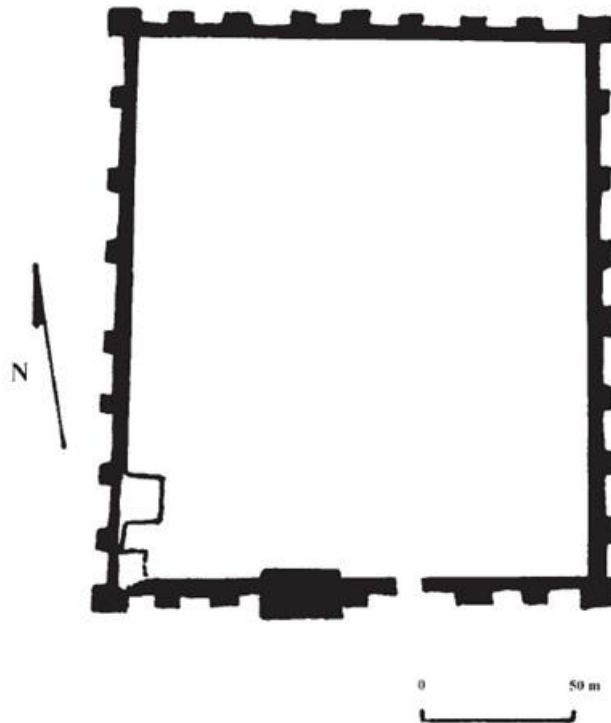


Fig. 5. The Sasanian fort of Durnali (after PUGACHENKOVA 1958)

In response to the permanent invasions of the tribes which originated from the Karakum and Kyzylkum deserts, the settlements of Chorasmia were commonly created in the form of fortified castles. The best example of the Sasanian fortified settlement of Chorasmia is Koi Krylgan Kala which was erected on an octadecagon plan about 87 m in diameter. Koi Krylgan Kala was settled from the 4th century BC and was primarily constructed in the shape of a circle 42 m in diameter in two storeys. The central round residence was surrounded with a court which was enclosed by a mudbrick wall. The open court was occupied with several buildings and the outer enclosure was reinforced by another wall with 9 towers²¹. Dzhanbas Kala is another walled settlement of Chorasmia was founded in the Hellenistic period (3rd-2nd century BC). The rectangular plan of this settlement was enclosed by two parallel walls which were separated by a corridor in two storeys. The corridors served as the place whence

²⁰ KOSHELENKO 1977: 42-43; PUGACHENKOVA 1958.

²¹ MONGAIT 1959: 266-267; BELENITSKY 1969: 77.

the archers targeted the invaders through the narrow slits. The northern side of the enclosing wall was pierced with a gateway which was flanked by two towers²².

In addition to the fortified settlement and citadels, many military fortresses were constructed along the borderlines of Sasanian Iran. The military fortresses were smaller than the fortified settlements and served particularly for monitoring and defending the strategic passes and gorges. Some of the military fortresses also served as the garrisons for providing and organising the military forces. According to the middle Persian manuscript of *Šahrestānīhā ī Ērānšahr*, Šāpur I established Nīšāpur after defeating Pahlizak-e Tur²³. In accordance with this historical report, the archaeological investigations have shown that Nīšāpur was primarily founded as a military base where was resided by a small population of the warriors. Nīšāpur having architectural components of a defensive complex was probably used as a military centre for organising the armies of Yazdegerd I (r. 399-420) and Bahrām V (r. 420-438) against the northern invaders. The unpassable moat of Nīšāpur 35 m in width and 12 m in depth surrounded the mudbrick enclosure which was about 8 m high and 5m wide and was pierced with a row of arrow slits on the upper part. The main structure of the Nīšāpur fortress was erected on top of a platform which was constructed with rectangular mud bricks²⁴.

Due to the successive invasions of the northern raiders, some fortifications were established over the northern part of Greater Khorasan. Archaeological excavations at the Sasanian area of Merv (Gyaur Kala) brought to appearance some remains of the Sasanian rampart and towers. Regarding the important strategic location of Merv, from the Seleucid period onwards, the fortifications of Merv have been reconstructed and reinforced several times²⁵.

Like the north-eastern Iranian fortifications, almost all settlements of Transoxiana including the excavated sites of Ak Tepe near Tashkent, Kala-i-Bolo in Farḡāna, Kala-i-Muq and Batyr Tepe in Sogdiana, Aul Tepe in Kashka Darya valley, Dzhumalak Tepe and Zang Tepe in the Termez area were fortified with the defensive installations²⁶. Such architectural style was applied in the Sasanian fortifications of the southern Karakum desert. For instance, Göbekli-depe was constructed for guarding the approach to the north-west limit of the oasis and was erected over an adobe platform which was surrounded with labyrinth fortifications as well as some towers erecting on the corners of the fort. Archaeological excavations have shown that Göbekli-depe Fort was founded in the Parthian period and developed during the reign of Šāpur I²⁷.

²² BELENITSKY 1968: 76-77.

²³ DARYAEE 2002: 18.

²⁴ LABBAF-KHANIKI, LABBAF-KHANIKI 1391/2012.

²⁵ WILLIAMS et al. 2003: 140-142.

²⁶ BELENITSKY 1969: 116.

²⁷ LITVINSKY et al. 1996: 473-474.

Northern fortifications

Besides the residential fortresses, there are some Sasanian buildings were even founded as the military bases and functioned as the defensive constructions for centuries. For instance, the detected 39 forts along the Gorgān Wall provided the frontier armies with the barracks extend 0.03 to 7.2 ha²⁸. One of the most important forts of the Gorgān Wall (fort number 4) extended about 5.5 ha and contained three rows, each of which runs 228 m comprising the similar rooms which were functioned as the military garrisons²⁹.

Qal'eh Kharābeh, another massive fort of the Gorgān Wall, was constructed to the south of the wall at the same time that the wall was rising. This fort covered a large space about 650×650 m² which was surrounded with two parallel mud-brick walls. The magnetometric surveys have indicated several rectangular rooms which were organized in parallel rows on the east-west direction and were separated with corridors 17 m wide. The rooms of Qal'eh Kharābeh were probably functioned as garrisons for military forces³⁰. The architectural characteristics of Qal'eh Kharābeh, as well as its spatial organization, exerted that this fort was playing an important role in providing the security during establishing and using the wall³¹. Gabrī Qal'eh was also constructed in the defensive landscape of the Gorgān plain some 8 km south-east of the wall. This fort with the square ground plan was provided with a prominent corner citadel which was overlooking the enclosed area of the fort³². Resembling the architectural features of Qal'eh Kharābeh and Gabrī Qal'eh, Qal'eh Gūg was planned according to a defensive scheme and was probably functioned as a campaign base for organizing the forces against the northern threats³³.

The Gorgān Wall as the most important defensive barrier of the Sasanian period was erected across the Gorgān plain and stretches from the eastern shores of the Caspian Sea to the western end of the Kopet Dag Mountains a distance of 198 km [Fig. 6]. The width of the wall ranges from 2 to 10 m consisting chiefly of brick and mud-brick m³⁴. A moat 5 m deep along the northern side of the wall improved defensive efficiency of the wall³⁵. The Gorgān wall has been partially established under Pērōz I (r. 459-484)³⁶ and has being improved during the medieval ages. This massive barrier, like other defensive installations of the northern borderline of the Sasanian Iran, provided the northern settlements with defence against the northern invaders.

²⁸ NOKANDEH et al. 2006: 121.

²⁹ SAUER et al. 2013: 178-211.

³⁰ OMRANI REKAVANDI et al. 2008: 161-162.

³¹ OMRANI REKAVANDI et al. 2008: 176.

³² SAUER et al. 2013: 351.

³³ SAUER et al. 2013: 352)

³⁴ NOKANDEH et al. 2006: 121.

³⁵ OMRANI REKAVANDI et al. 2008: 13.

³⁶ NOKANDEH et al. 2006: 163.

The Gorgān Wall apparently came to end at Pish Kamar in the westernmost piedmont of the Kopet Dag mountains. The Kopet Dag functioned as a natural obstacle stretches to the Hindu Kush mountains in northern Afghanistan and was equipped with the artificial walls and keep towers at the penetrable strategic points. The fortifications along the Kopet Dag ranges has been already examined by the author and introduced as the Defensive Walls of Khorasan³⁷.

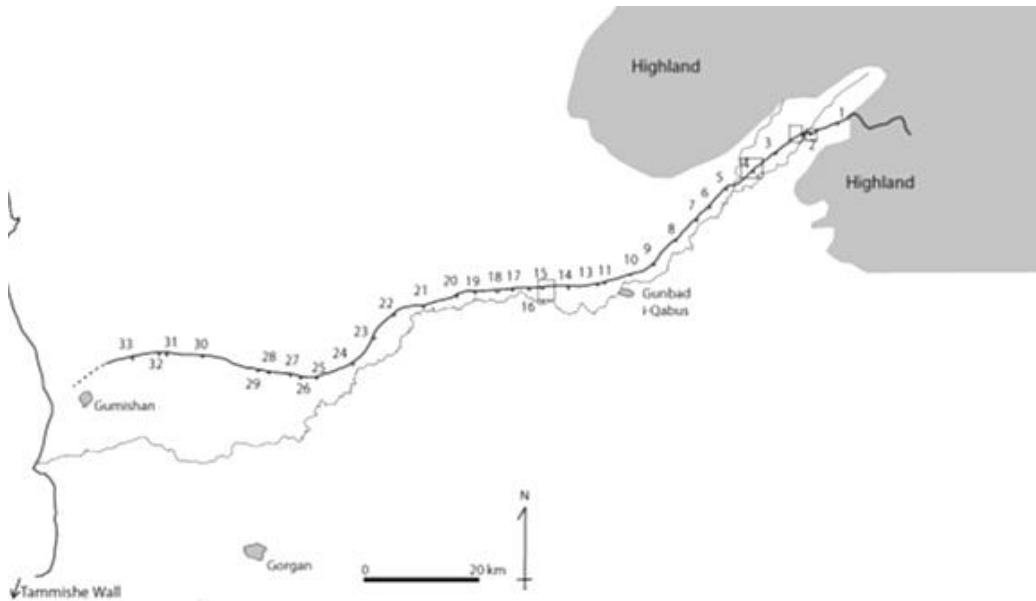


Fig. 6. The Gorgān Wall (after OMRANI REKAVANDI et al. 2007)

One more Sasanian fortification of northern Iran was another linear wall called Tamiša which was constructed probably under Khosrow I (r. 531-579). The wall lies in the west of the village of Sarkalāteh in Gorgān county and extends about 11 km blocking the southeastern coastline of the Caspian Sea. According to radiocarbon dating, the bricks of the wall date back to about AD 402-537 and the fortresses of Bānsarān, Nārenj Qal‘eh, and Qal‘eh Dokhtar were established in contemporary with or just after the construction of the wall³⁸.

There was another strategic pass along the western coastline of the Caspian Sea providing a route for the Caucasian invaders to plunder the northwestern territory of the Sasanians. Responding to this threat, the Sasanians constructed some fortifications between the western shore of the Caspian Sea and the Caucasus Mountains including the fortifications of Darband. The fortified city of Darband having a rectangular plan lies in the westernmost of the Darband Wall consisting two

³⁷ LABBAF-KHANIKI 1393a/2014a ; 1393b/2014b.

³⁸ OMRANI REKAVANDI, SAUER 2013.

parallel walls which the northern one was 3650 m long and the southern 3500 m running from the mountain into the sea. The northern wall equipped with 27 towers and was pierced with 5 gateways leading to the city. 9 rectangular towers and 7 gateways were erected along the southern wall³⁹ [Fig. 7].

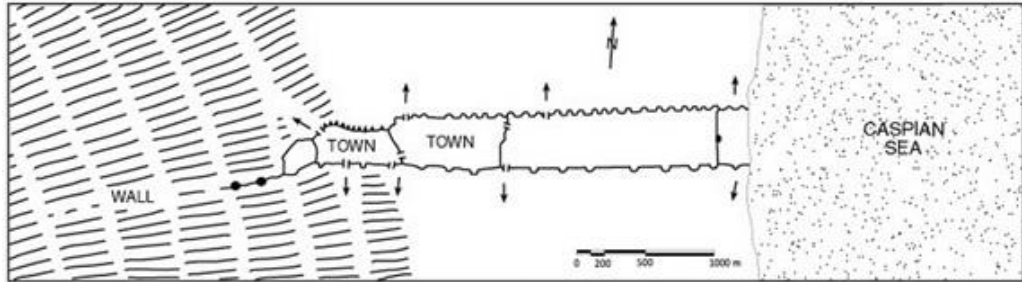


Fig. 7. The fortifications of Darband (after KETTENHOFEN 1994)

The Dagh Bary mountain wall runs from immediately west of the Darband fortifications for about 42 km to the west⁴⁰ and joins to the Caucasus ranges which provided a natural obstacle against the northern invaders. The passable points of the ranges were guarded by the fortresses and watchtowers which controlled the route passing the mountains.

Some 130 km south of the Darband fortifications, another defensive wall called Ghilghilchay (Ġilġiċay/Gilgiċay) wall was probably constructed under Kavād I (r. 488-531) which survives in places over 5 m height and 4.15 width. The wall consists of mud bricks 40×45×12 cm in dimensions and clay mortar and was plastered with clay. The remains of 140 towers have been identified along the wall⁴¹ which were semi-circular 5.7 m in diameter⁴².

Some fortified settlements were established over the fertile plain of Mughan in north-western Iran during the Sasanian period. The archaeological survey of the Mughan plain has identified some residential fortresses having a rectangular plan and were surrounded by the wide ditches. The largest Sasanian fortress of the Mughan plain is Ultan Qalasi located on the southern bank of the Aras river between the modern cities of Parsabad and Aslanduz. Ultan Qalasi covering an area approximately 33 ha northern side of which has been eroded by the Aras flow which provided the northern side of the surrounding ditch. According to the archaeological results, the enclosing wall of Ultan Qalasi was equipped with towers and the main gateway located on the western side was flanked by two semi-circular towers⁴³.

³⁹ GADJIEV 2008.

⁴⁰ ALIEV et al. 2006: 145; GADJIEV 2008: 1-2.

⁴¹ ALIEV et al. 2006: 162.

⁴² ALIEV et al. 2006: 149.

⁴³ ALIZADEH 2011 2014.

The most important Sasanian monument of north-western Iran is Takht-e Solaymān which is not important only because of its religious function but for the formidable defensive fortifications. The stone enclosure of Takht-e Solaymān 13 m high was abutted by 38 semi-circular bastions jutting out from the wall's outer face⁴⁴. Each tower was surmounted by a room which was accessible through a staircase passing the rampart. The ramparts provided a way for walking along the wall and a row of loopholes surmounted by stepped parapets were set in the upper portion of the wall⁴⁵. A compound of the Sasanian buildings of Takht-e Solaymān was particularly enclosed by another wall embracing a roughly square area and was pierced by a gateway situated at the middle of the northern side. Every side of this enclosure probably had 8 towers and a corridor passed through the wall⁴⁶ [Fig. 8; Fig. 9].

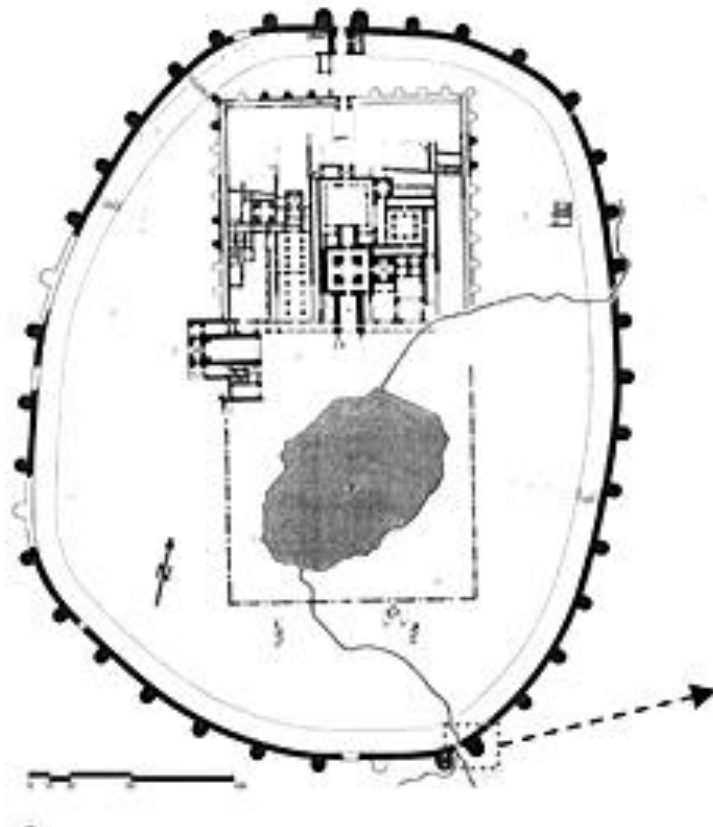


Fig. 8. Takht-e Solaymān (after HUFF 1978)

⁴⁴ HENNING VON DER OSTEN, NAUMANN 1961: 51.

⁴⁵ SHAHMOHAMMADPOUR SALMANI 1384/2005: 290.

⁴⁶ SHAHMOHAMMADPOUR SALMANI 1391/2012: 114.

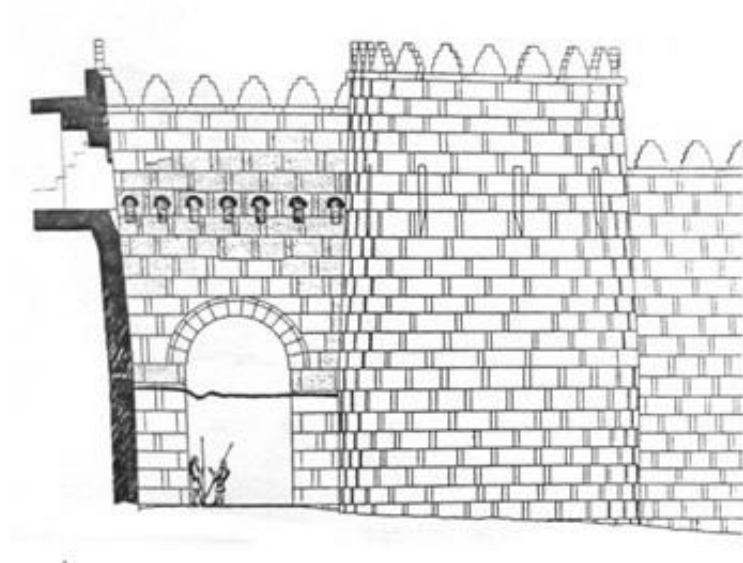


Fig. 9. Takht-e Solaymān a reconstruction of the south-eastern gate (after HENNING VON DER OSTEN and NAUMANN 1961)

Western fortifications

Due to a confrontation with the Roman empire, the western frontier of the Sasanian territory was dotted with abundant castles and forts. Although the rivers of Euphrates and Tigris effectively prevented the opponents to invade and plunder the western Sasanian borderlines, many fortifications including the fortresses of Ḥira (Kasr al-Abyadh, Kasr ibn Bukarlah, Kasr al-‘Adasiyin), Uyun at-Taff, al-Qadisiyya, Udhayb, Amghishiyya, Ain Tamr, Dumat Jandal, Zumayl [Themail?] and the site of Basra (7 forts, including one at Zabuqa and two at Khurrayba)⁴⁷ were established at the strategic points providing the populated centers with defence against the continued Romans attacks. Moreover, a linear ditch and a system of defence were created under Šāpur II (r. 309-379) which provided the Arab peoples with security against the Bedouin plunders. These fortifications were probably those which have been mentioned in the Middle Persian text of *Šahrestānīhā ī Ērānšahr* as ‘War ī Tāzīgān’⁴⁸. The effectiveness of this system led to establishing no defensive wall around the city of Ḥira which was situated between the desert and the cultivated lands⁴⁹.

The city of Pērōz-Šāpur was located in the middle region of Euphrates basin in which other fortresses including Tilbis, an-Na‘usah, ‘Alusah, and Hit were erected.

⁴⁷ SIMPSON 1993: 3.

⁴⁸ DARYAEE 2002: 14.

⁴⁹ FRYE 1977: 10.

The Roman fortresses of the Nisibis and Singara regions in northern Mesopotamia were ceded by the Romans to the Sasanians after Šāpur II triumphs against Jovian in AD 363 and some forts including Ain Sinu and Seh Qubba were re-occupied by the Sasanian armies⁵⁰. The southern Mesopotamian settlements were also guarded by the defensive installations. The most important Sasanian fortified city of this region was Vēh-Ardašīr which was founded by Ardašīr I. This city covering some 700 ha following the circular plan of Darabgird and Ardašīr-Khorra and was enclosed by a wall measuring some 10 m thick at the base which was equipped with interval semi-circular towers projecting from the mainline of the wall⁵¹.

Some linear walls running several kilometres were also erected alongside the western borderline of the Sasanian territory obstructing the routes to the fertile lands of the Mesopotamian plain. A defensive wall called El-Mutabbaq was established on the borderline running between the Tigris in the south of Samarra and the northwestern deserts and stretches *c.* 40 km. This wall constructed with mudbricks 40×38×11 cm in dimensions was equipped with towers and a ditch measuring 20-30 m across and 2-3 m deep was running in parallel with the wall. Another defensive wall in Mesopotamia called Umm Rus lies in the east bank of the Euphrates which stretches more than 10 km with 7 m in thickness. This wall was also equipped with towers were erected at 60-meter intervals⁵². The remains of another linear wall called the Gawri Wall have been primarily identified by Ali Hozhabri⁵³ and re-examined by Sajjad Alibaigi⁵⁴ extends almost 115 km from the Bamu Mountains in the area of Salas-e Bābājāni in the north of Sarpol-e Zahab County, to Zhaw Marg Village near Guwaver of Gilan-e-Gharb in the south of Sarpol-e Zahab County⁵⁵.

Some shorter walls were constructed to block the mountain passes and gorges including a wall were erected across a gorge some 36 km east of Farrāšband in Fārs province [Fig. 10]. This wall comprised of stone rubbles running about 200 m in the northwest-southeast direction which obstructed the connecting way between Farrāšband and the Sasanian city of Ardašīr-Khorra. A heap of stones has been identified on the eastern side of the wall which can be considered as the remains of a keep tower⁵⁶. Some defensive walls also have been identified in the mountainous regions of northern Khorasan including the walls of Aq Darband and Mozdouran blocking the main branches of the Silk Road and the towers of which controlled traffic between the Iranian plateau and Central Asian steppes⁵⁷.

⁵⁰ SIMPSON 1993: 3.

⁵¹ NEGRO PONZI 1967: 45-47; SIMPSON 2017: 25-26.

⁵² READE 1964.

⁵³ HOZHABRI 1385/2006.

⁵⁴ ALIBAIGI 2019.

⁵⁵ ALIBAIGI 2019: 3.

⁵⁶ KLEISS 1999: 103.

⁵⁷ LABBAF-KHANIKI 2014A.

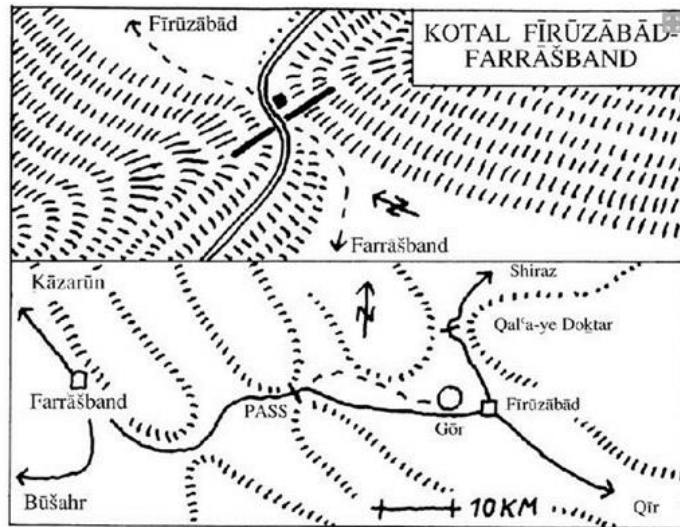


Fig. 10. The wall blocking the Fīrūzābād-Farrāšband route (after KLEISS 1999)

Southern fortifications

In southern Iran, a chain of defensive fortresses was constructed alongside the coastlines of the Persian Gulf to guard the rich seaport cities which were flourished by the maritime trade during the Sasanian period. The prosperity of these cities meant the economic flourishing of the empire, albeit it motivated the Arab raiders of the southern lands to pass the gulf and plundering the rich cities. Responding to this threat, many towers, forts, and fortresses were erected alongside the northern and southern coastlines of the Persian Gulf during the Sasanian period. One of the most important port fortresses was Sīrāf which was established in the Sasanian period and developed during the Islamic era. The Sasanian fortress of Sīrāf having a rectangular enclosure was entered through a gateway on the southern side which was flanked by two semi-circular towers⁵⁸ [Fig. 11]. Interior space of the fortress was occupied with rows of rooms which served as barracks or magazines⁵⁹. Another enclosed area situated outside the military quarter and comprised the residential constructions which have almost disappeared except the partly survived enclosing wall⁶⁰. The remains of another Sasanian fortress were identified on the northern coastline of the Persian Gulf at Rīšahr some 180 km of Sīrāf. Rīšahr the name of which derives from Middle Persian Rēv-Ardašīr, comprised of a castle with a rectangular mud-brick enclosure which was embraced by a surrounding ditch⁶¹.

⁵⁸ WHITEHOUSE 1971.

⁵⁹ WHITEHOUSE, WILLIAMSON 1973: 33.

⁶⁰ WHITEHOUSE 1972: 70-71.

⁶¹ WHITEHOUSE, WILLIAMSON 1973: 39-41.

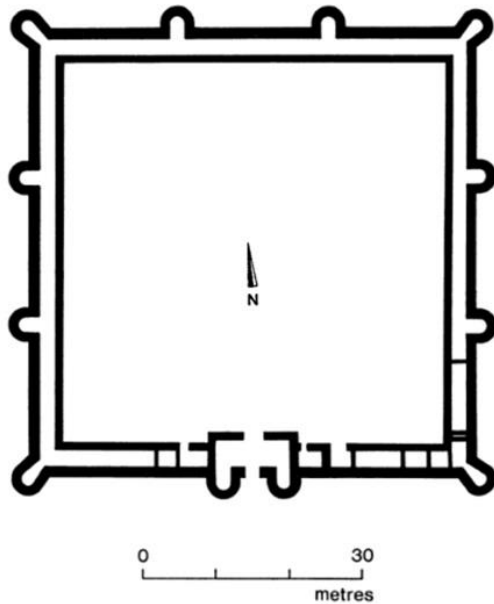


Fig. 11. The Sasanian fort of Sirāf (after WHITEHOUSE and WILLIAMSON 1973)

Archaeological investigations revealed also some Sasanian fortifications alongside the southern coastline of the Persian Gulf including the castles of Suhar, Damam, Jorrafār⁶², Kush, and Qal‘at al-Bahrain. Excavations at Kush brought to light abundant iron trefoil arrowhead representing the defensive function of the castle⁶³. The most important fortress on the southern coasts of Persian Gulf is Qal‘at al-Bahrain, which is located in the northern beach of Bahrain. Archaeological excavations at Qal‘at al-Bahrain revealed a castle which was established in the late 3rd-early 2nd century BC and served until the 13th century as a fortified settlement⁶⁴. Some fortlets were also constructed in this region, two of which have been identified in the coastal settlement of ed-Dur in Eastern Arabia. One of the ed-Dur fortlets dating back to the 3rd century CE has a rectangular plan was equipped with four corner towers with round plan. The second fortlet of ed-Dur resembling the first one, was rectangular enjoying four corner towers, but one of which was rectangular and the rest with circular plan [Fig. 12]. The latter fortlet was occupied until the 4th century CE⁶⁵.

⁶² WILKINSON 1979: 888.

⁶³ KENNET 2002: 154; 2005: 109-110.

⁶⁴ KERVRAN et al. 1983: 5; POTTS 1990: 111-115.

⁶⁵ KENNET 2005: 113.

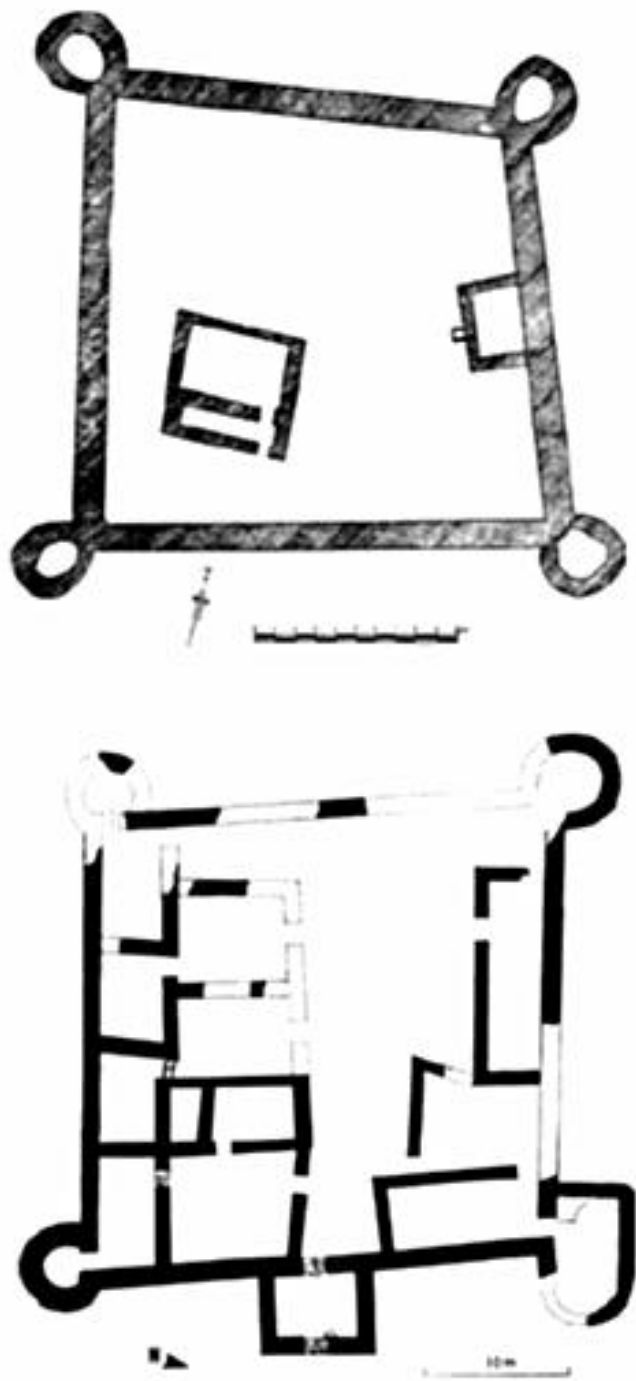


Fig. 12. Two fortlets in ed-Dur (KENNET 2005)

Like the ed-Dur's fortlets, another construction so-called Fulayj has been brought to light in the north of Oman in the Batine coast. The Fulayj covering an area 0.09 ha was enclosed by a wall 2.65 thickness. The gateway 1.62 m width was flanked by two towers opened to the eastern side of the fortress. The walls of the Fulayj fortress was constructed with mudbricks in the upper portions and irregular stones and mortar in the lowers and foundations. The considerable thickness of the Fulayj's enclosure as well as the lack of evidence of daily life suggest that the Fulayj was functioned as a military construction⁶⁶.

Conclusions

The Sasanian Empire existence was very much dependent on defence against the opponents who steadily threatened the Iranian boundaries. Accordingly, the powerful monarchs including Šāpur I, Šāpur II, Yazdegerd I, Bahrām V, and Khosrow I have endeavoured to construct defensive installations and reinforce the frontier fortifications which obstructed the ways of raiders intending to invade and plunder the inner fertile lands of the Iranian plateau. These fortifications were installed alongside the natural barriers, serving together as a rampart around the Iranian plateau. The artificial portions of this rampart were founded under Ardashir I and completed over four centuries of the Sasanian era. In fact, the location and system of defence of the early Sasanian city of Ardašīr-Khorra established a model to organise the defensive landscape of the Iranian plateau. As mentioned above, Ardašīr-Khorra was located in plain which was surrounded by mountains and the only accessing way of which was monitored by a massive fortress. According to the Sasanian policy in establishing the system of defence for their territory, they used the natural barrier surrounding the plateau as the obstacle against the neighbouring invaders. In order to monitor and defend the passable points of the natural barriers, they built artificial fortifications including the linear walls, watchtowers and castles.

Regarding the cases which were described in this paper, the Sasanian defensive constructions were frequently established in the frontier regions and were used for organising the military forces as well as defence against the foreign opponents. Architectural form and geographic location of the defensive constructions were determined with the expected functions. Accordingly, the building with defence function was surrounded by massive enclosure and installations including the interval towers which served simultaneously as watchtowers and bastions. Another group of the Sasanian fortifications include the garrisons and barracks which were occupied by the military forces and served as centres for organising the armies against the invasions. These barracks were erected in the frontier regions in order to act quickly against the possible sudden attacks of the raiders. Besides the fortifications

⁶⁶ AL-JAHWARI et al. 2018.

which were intended solely for residence and organising the armies, some fortifications were erected around the Sasanian palaces and cities in such a way that we can consider them as the palace-forts and city-forts.

The materials which were applied for the Sasanian defensive structures depended on the accessible natural sources. Accordingly, the frequent masonry in the mountainous regions was stone and it was usual to use mud brick and *pisé* in the plains. The enclosing walls were frequently 5m thick providing an impassable barrier against the heavy invasions. There was a row of arrow slits on the upper portion of the walls which were accessible through a narrow passageway running along the wall. In the plains and lowlands, the enclosures were surrounded by the wide and deep ditches filled up with the water which was transferred from the rivers by means of canals. Some surrounding ditches were also fed by the springs and *qanats* gushing out into the canals or opened directly within the ditches.

Although the Sasanian defensive architecture represents a defined pattern in the form and structure, we should accept that this pattern was not restricted to the Sasanian period nor geographic borders of the Sasanian Iran. In fact, the form and content of the Sasanian defensive architecture were determined with the atmosphere which was created under the political, social, economic, and geographic conditions of late antiquity. In other words, the need to defend and/or invade caused to use the special kinds of masonry which were applied in the construction of the special architectural elements. Subsequently, the similar needs would result to create a similar form in other places and times and that is why the Sasanian defensive architecture inherited the Arsacid characteristics and continued into the Islamic period. On the other hand, the interactions between Sasanians and their neighbouring empires led to occur some similarities in the defensive architecture of Iran and Rome which was crystallised in the Roman fortifications erected in the vicinity of the Iranian borders resembling the Sasanian forts.

Consequently, the Sasanian defensive architecture can be considered as a complex of architectural rules and patterns which continued along with the time and place. Accordingly, identifying the manifest of Iranian defensive architecture in the Islamic period and examination of the Roman fortifications would shed significant lights on the Sasanian defensive architecture.

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