

City Planning System of the Beikthano (Vishnu) Pyu Urbanized Site Focusing on Archaeologically Exposed Gateways

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Abstract

Beikthano is one of the earliest urbanized sites in archaeological landscapes of Myanmar. In archaeological accounts, this city reveals the structural remains of city walls, city gateways, moats, palace citadel, religious and other structural remains, and variety of excavated finds in Pyu Cultural context. Particularly, for its city planning system, among the total 66 excavated structural remains and 8 excavated test pits, the evidenced city gateways have been found in 7 numbers such as of KKG-13, KKG-15, BTO-22, BTO-35, BTO-36, and Test Pits No. 7 and 8. These gateways reflect the potential use in different characters of political and social-economic significances for the city planning system of Beikthano.

Key Words: city planning system; urbanized site; gateways; social-economic importance; political significance

Introduction

City planning system is one of the important features in the archaeological records of ancient urban societies. In the archaeological landscapes of Myanmar, the early urban societies which coincided with these characteristic features have been identified by those of Pyu in the inland region, while by those of Mon and Rakhine in coastal regions. But the strong evidences of archaeological information come from Pyu Cultural sites, and more reliable phenomena are found in the discernable character with their cities such as Beikthano (Vishnu), Halin, and Sri Ksetra, as well as Maingmaw. Among them, Beikthano (Vishnu) is the earliest major urban city, located in the Taungdwingyi Township, Magwe Region. In fact, early archaeological investigations and excavations to the site have been made from 1905 to 1963 and the number of 25 mounds was excavated namely KKG 1 to 25. Later there were 41 mounds which were excavated from 1995 to 2015 with the structural remains namely as BTO 1 to 41. From these archaeological excavations, some glimpse to its city planning system of Beikthano has been thrown light by the exposure of city walls, moat and gateways, palace citadel, religious and other structural remains. In fact for the fortification system, the early accounts have been identified by its exposed characteristic features of gateways and city walls, as well as the orientated features of palace site. But, by the recent excavations of Test Pits No. 7 to 8 made in 2014 to 2019, some sort of different manner to the other

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excavated gateways of the city appeared – not only in the fortified purposes of political importance but also of the social-economical significance to the city.

Site Settings and Composition of City planning Feature

The Pyu urban site of Beikthano (Vishnu) city offers a precious scientific documentation on the indigenous development of urbanization in South East Asia, at the latest from the second and first century BCE to the fourth century CE.¹ It is, immediately lying at Latt. 20° 00' N and Long. 95° 23' E, situated to the north of Kokkogwa village, 16.09 kilometers (10 miles) on the northwest of Taungdwingyi Township in Magwe Region.² In topographical feature, Beikthano ancient city was built at the Junction of the Sadoun and Yanpe stream, between the Taungdwingyi and Yin valley. The height of its western area is 121.92 meters above the sea level, although the northern and southern areas are higher than others. The average altitude of Beikthano is 101.2 meters high above sea level. Yanpe stream flowed westward along the southern limit of Kokkogwa village, takes a northern turn close to the southwest corner of the city for a short distance and then resumes its western direction. The only hamlet lying within the city area is Innywargyi, known after the large lake. It lies exactly in the northwest corner of the fortified area.³

In city layout, Beikthano belongs to rectangular shapes in plan with city enclosures on the northern, eastern and southern sides, but the whole stretch of the western wall was lost. The eastern side is two miles long while the north and south sides are shorter by two furlongs. Indeed, the city walls and gateways generally reveal the similar characteristic features of other Pyu cities bending arms inward its occupation area. The whole enclosure of the city wall has 859 hectares.⁴

Inside the city, as the natural barriers or supports, the two lakes, namely Ingyi and Gyogyarkan are situated close to the low-lying western edge of the city area – big enough to form a natural defense.⁵ There are a considerable number of exposed structural remains, including palace citadel, religious and ritual structures, residential buildings and other structural remains. Noticeably, the orientation of the palace site is not falling just into its centre, but more or less occupied in the northern sector of the city, and as well as close to the natural support of Ingyi Lake in its background.

¹ Janice Stargardt, *The Ancient Pyu of Burma*, Volume I, London, Cambridge University Press, 1990, p.42 (Hereafter cited as Stargardt, *The Ancient Pyu of Burma*)

² See Map.1

³ Elizabeth H. Moore, *Early Landscapes of Myanmar*, Bangkok, River Books, 2007, pp.155–156 (Hereafter cited as Moore, *Early Landscapes*)

⁴ Aung Thaw, *Historical Sites in Burma (Myanmar)* Rept., Yangon, SarpayBeikman Press, 1978, pp.1–6

⁵ Stargardt, *The Ancient Pyu of Burma*, p.161

Moreover, this northern sector is composed by more structural remains more than the other sectors of the city, and as well as just outside the northern city wall also by the cluster of the other structural remains. In fact, the particularly feature inside the city of Beikthano is of the alignment of earthwork, running from the southern wall of the place site about 80 percent of the distance towards the south city wall. The eastern sector of the city has less attention to the concentration of its urbanized structures.

Exposed Gateways system of Beikthano

Although there are 12 gates in traditional accounts, the examples for the fortification system of city gateways to the city can be lighted by seven excavated sites – those of KKG-13, KKG-15 and BTO-22 on the northern enclosed wall, and of BTO-35 and BTO-36 on the eastern wall, while potentially Test Pits No. (7) and No. (8) on the southern city wall, as follows:⁶

No	Site Name	During/ Period	Name of Team Leader	Remark
1.	KKG-8	17-Aug-1960 to 29-Sept-1960	MyintAung,U	Palace gate
2.	KKG-13	22-Jan-1962 to 19-March-1962	MyintAung,U	City gate (North)
3.	KKG-15	14-Oct-1962 to 03-April-1963	MyintAung,U	City gate (North)
4.	BTO-22	2007-2008	Aye MiSein,Daw	City gate (North)
5.	BTO-35,36	2011-2012	KyawMyoWin,U	City gate (East)
6.	Test-7,8	2018-2019	Lin TunKyi,U	City gate (South)

Although their general characters of these city gateways are similar to those of Pyu city gateway system, the particular features on each are slightly different.

(a) The Northern City Gateways of KKG-13, KKG-15 and BTO-22

(i) Exposed Characteristic Features of KKG-13

Located on the northern city wall, KKG-13 has a pair of arms extending inwards to a distance of 80 feet and 86 feet representatively on the east and west sides, with passage in 20 feet wide⁷. The width of the wall as well as the ramparts is 7 feet.

Within the passage formed by the two arms and about 45 feet south of the bend was a portion of charred wooden post lying across the passage. Directly to the east of it and close to the east arm was found an iron socket⁸. Another socket laid about 15 feet to the south of the burnt post. These are evidently parts of a gate originally fixed in the

⁶ See Map. 2

⁷ See Fig.1

⁸ U Aung Thaw, *The Excavation at Beikthano*, Rangoon (Yangon), Ministry of Culture, 1968, p.11, (Hereafter cited as Aung Thaw, *Excavation at Beikthano*)

middle of the entrance passage. The burnt post and bits of charcoal strewn about it indicate that the wooden gate was destroyed by fire.

(ii) Exposed Characteristic Features of KKG – 15

This site lies on the north city wall, about 1000 yards to the west of KKG-13. It has a span in 15 feet wide, bounded by two arms gradually bending inwards at the entrance⁹. The portion of the city wall west of the gateway is 15 feet wide and takes squarish turn, where the eastern counterpart has an irregular width, the maximum being 10 feet. The latter gradually curves inward from a distance of about 30 feet from the entrance so that the plan of the opening sides is not symmetrical. But the arms run to the distance of 81 feet from the north end of the city wall, and their outer sides which from the wall of the entrance passage are quite regular. The eastern portion of the city wall has a brick ramp as an internal support. The average width of the arms is 15 feet. The passage is extended to run 20 feet, but here the portion of the arm is only 10 feet wide.

Within the passage, about 10 feet north of the gaps were found two iron sockets, charred wooden posts and beams, iron plates and many bits of iron. At the extreme end of the passage, close to the west wall were also discovered two iron sockets. It is therefore apparent that a double-leaf wooden gate was originally installed at the gateway and guard rooms were provided behind the gate, within the arms, for the security and defense of this entrance.¹⁰

(iii) Exposed Characteristic Features of BTO – 22

BTO- 22 is situated at the Beikthano ancient city nearby Shweyaungdaw pagoda.¹¹ The eastern arm of the city gate is heavily damaged. And the middle of the arms remain of nine courses of bricks above the ground level but at the entrance of the arms were found two courses of bricks. The entirely northern wall of the city is 2.5 m. In this gate, the use of brick size was found in (18"x 9"x 3"). Many of bricks have fingerprint. To the west of the eastern arms close to the city wall, an iron socket was found.^{12 13} So many iron nails were also found from this site.

(b) The Eastern City Gateways of BTO-35 and BTO-36

(i) Exposed Characteristic Features of BTO-35

⁹ See Fig.2

¹⁰ Aung Thaw, *Excavation at Beikthano*, p.12

¹¹ See Fig.3

¹² Daw Aye Mi Sein, ဗိသုန်းမြို့ဟောင်း တူးဖော်မှုအစီရင်ခံစာ (၂၀၀၇-၂၀၀၈) (*Report on Excavation at Beikthano Old City (2007-2008)*), Department of Archaeology, National Museum and Library, Ministry of Culture, 2008, p.7 (Hereafter cited as Aye Mi Sein, *Report on Beikthano (2007-2008)*)

¹³ See Fig.4

BTO – 35 is situated at the Beikthano Ancient city nearby Shweyaungdaw pagoda (Lat. 20° 00' 49.4" N and Long. 95° 23' 33.7" E).¹⁴ It has two arms in the slightly curve shape and the end of the arms is narrow. These two arms belong to is (61)ft long and (17' 3") wide in its span. At the end of these two arms have each small room (or) entrance room and each room is about (3) ft wide.

The width of the wall as well as the ramparts is 7 ft and the height remains to nine course of brick above the ground level. In this gate, the use of brick size was to be found the two types (18"x9"x3"), and (19"x9.5"x3"). Between the arms of the narrow passage close to the wall about (10") an iron socket was found.¹⁵ These are four similar iron sockets that were found on each side of the base of the wall of the arms. These are evident parts of the wooden gate originally fixed in the middle of the entrance passage. At the entrance end of the passage close to the wall two iron sockets were discovered. So it is apparent that a double leaf wooden gate was originally installed at the gate way and guard rooms were provided behind the gap, with for security and defense of this entrance.

During excavation from this gateway (BTO-35), storage jar, cooking vessel and (17) Pyu coins were found.¹⁶

¹⁴ See Fig.5

¹⁵ Kyaw Myo Win, *Report on Beikthano (2011-2012)*, p.7

¹⁶ See Fig.6

(ii) Exposed Characteristic Features of BTO-36

BTO-36 is situated in the northern part of Beikthano Archaeological Museum and Western part of the BTO-15 about (150) ft away, (Lat. 20° 00' 069" N and Long. 95° 39' 227" E)¹⁷. Before the excavation of this mound, the length is (90) ft East to West, (60) ft North to South. It was also constructed by two arms with entrance place measuring from side to side is (16' 10") and end of arms is (8' 3") wide. At the end of these two arms have each small room (or) entrance room, each on about (3) ft wide.

The width of the wall as well as the ramparts is 7 ft and the height remains to eleven course of brick above the ground level. In this gate, the uses of brick side were found the two types (18"x 9"x 3"), (19"x 9.5"x 3"). Remarkably, this city gate is little small than another gate BTO-35. In fact, this gate was reconstructed on the original brick line of the wall with wider and bigger than latter one. So it is assumed that the first gate way is destroyed anyway and then they reconstructed the gate as a little small on that first old gateway. During the excavation of that gateway, iron socket were also found as like as BTO-35. So it is apparent that a double leaf wooden gate was originally installed at the gate way.

(b) The Southern City Gateways of Test Pit. No. 7 and Test Pit No. 8

(i) Exposed Characteristic Features of Test Pit No. 7

Test-7 is located at N 19 59 '24.8 ", E 95 23' 19.2" northern part of the Jokkone village and southern City wall of Beikthano ancient city.¹⁸ It is a high hill that connects to the south wall of the old city of Beikthano. Test-7 is a full of brickbat mound excavated by 9 blocks and one meter long trench. The bricks were found about 1 foot deep and the bricks were rotting. Brick walls were found on the grids. A few potshards were found and burned wooden post hole were found.¹⁹

(ii) Exposed Characteristic Features of Test Pit No. 8

Test-8 is located at N 19 59 '20.6 ", E 95 22' 31.2" northern part of the Kokkogwa village and southern City wall of Beikthano ancient city.²⁰ It has the south a large ridge lined with two floor levels. The second floor has two dimensions of 4 ft 6 inches, and the outer wall is 11 ft 2 inches. Between the two walls, a 168-cm-thick, man-made clay fillet was found. The south wall of the city's entire south wall is about 21 ft 3 inches by 22 feet. Significantly, the excavation at the north wall of BTO-40 show that it is approximately 6

¹⁷ See Fig.7

¹⁸ See Fig.8

¹⁹ U Lin Tun Kyi, ဗိသုနိဒါန်းမြို့ဟောင်း ' တူးဖော်မှုအစီရင်ခံစာ (၂၀၁၁-၂၀၁၂) (*Report on Excavation at Beikthano Old City(2018-2019)*), Department of Archaeology, National Museum and Library, Ministry of Culture, 2019, p.11(Hereafter cited as Lin TunKyi, *Report on Beikthano(2018-2019)*)

²⁰ See Fig.9

ft 6 inches. Similarly, the wall of the eastern wall is the same as the north wall. Compared to the walls of the excavated walls, the south wall was the widest and the wall was filled between the two floors. Comparison studies of the city gates that have been excavated have been found to be larger than that of the other city gates of Beikthano ancient city.

Conclusion

The archaeological evidences of city gate ways from Beikthano pyu city reveals the significant features relevant to each respective cardinal point provide some glimpses to its city founding system. There are totally 7 excavated gateways in Beikthano and in the comprehensive study on these gateways, it can be concluded as follows:

- (1) Although all of the exposed gateways reveal the similar character of arms in bending inward the city occupation area, detail works of them testify to slightly different manner on each side
- (2) In topography feature, the north, east and south sides of the city are higher than the west, and the eastern side is the highest one, so that the eastern gateways of BTO-35 and BTO-36 have been built without foundation.
- (3) The northern sector and even its outer side of the city concentrate the variety of the structural remains, and the palace citadel was laid out more or less than in this northern sector, not in its central point.
- (4) It indicates that the northern gateways of KKG-13, KKG-15, and BTO-22 served as not only for defensive purposes but also for the social-economic importance to the city.
- (5) To the eastern gateways, this sector shows very rare outcome of the structural remains in city components, so this side reveals probably little interest in city economy, and only supported to city guard for fortification.
- (6) In the southern part, particularly Test pit No. 8 reveals significant features of gateway opening with the width, enough for two bullock-carts to easily pass by and particularly two brick ramparts.
- (7) Moreover, this gateway has been found in the leading direction from the end of the earthwork of the southern extension from the palace citadel on the one hand, and to the Kokkogwa Village, just outside the southern city wall – which once found with the Pyu material remains under the ground of the present Village.
- (8) So, it reflects that the southern city gateways might have served as the strongly to the defensive purpose, or other devices to control of water resources for agriculture and other reason from the south side, because of the Yan-Pe flooding area in this portion.

But these conclusions are made with an attempt based on the available data from the excavated reports and more complete interpretation for it is necessary to do further researches, by means of future archaeological investigations.

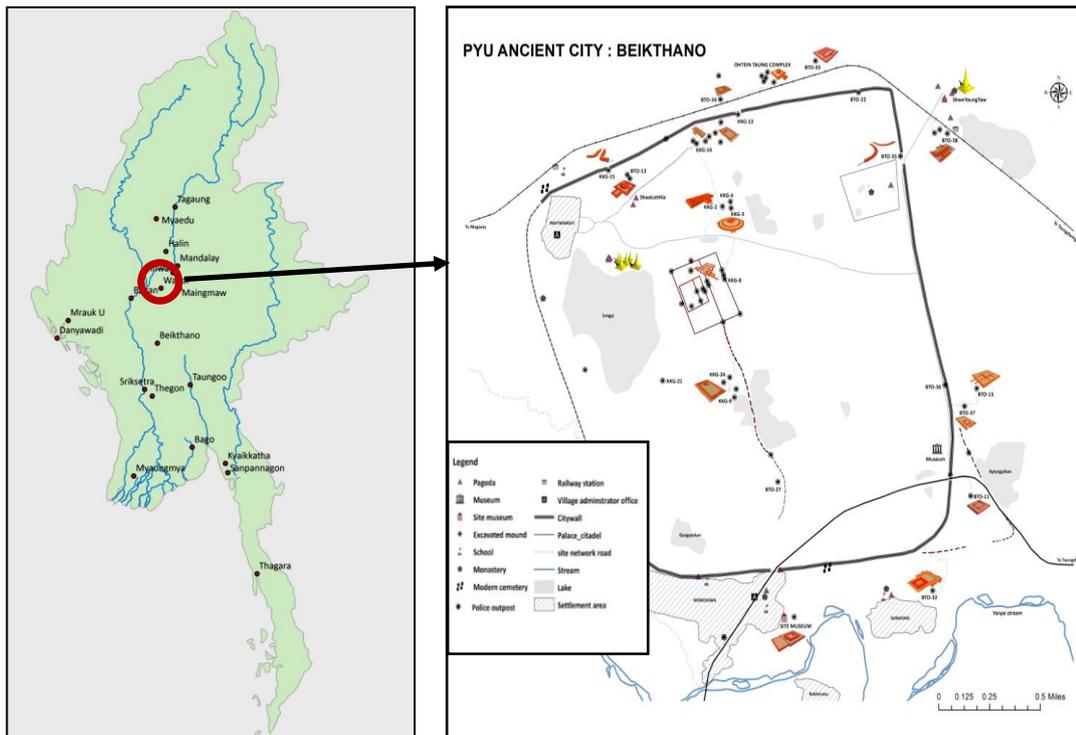
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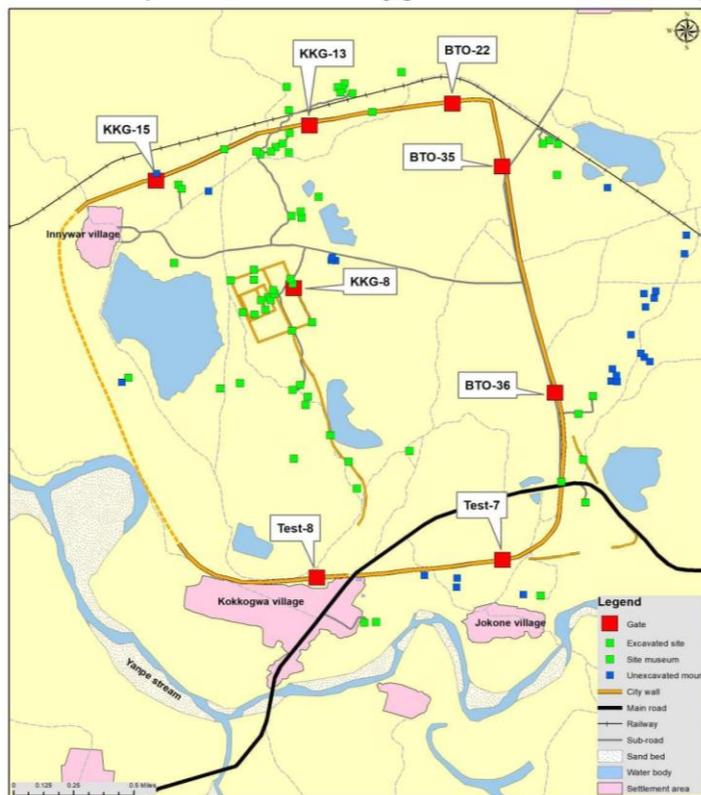
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Map.1 Location and its Excavated Sites on Beikthano Ancient City in Myanmar



(Sourced from recently excavated reports: 2015, 2016, 2018, 2019)

Map.2 Exposed city gateways of Beikthano



(Sourced from Department of Archaeology)



Fig.1 City Gateway KKG - 13

Fig.2 City Gateway KKG - 15

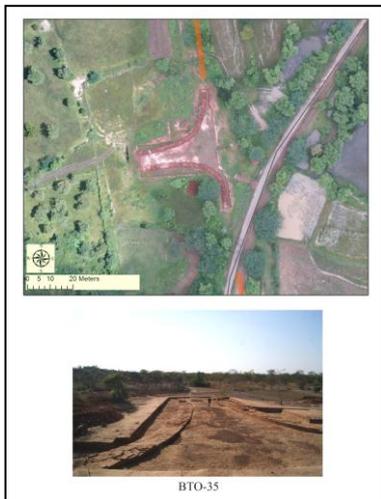
(sourced from Aung Thaw, 1978)



Fig.4

Fig.3 City Gateway BTO - 22
Iron socket (BTO-22)

(Sourced from Department of Archaeology)



Coin from BTO - 35

Fig.5 City Gateway BTO - 35

Fig.6 Pyu

(Sourced from Department of Archaeology)



Fig.7 City Gateway BTO – 36
 (Sourced from Department of Archaeology)

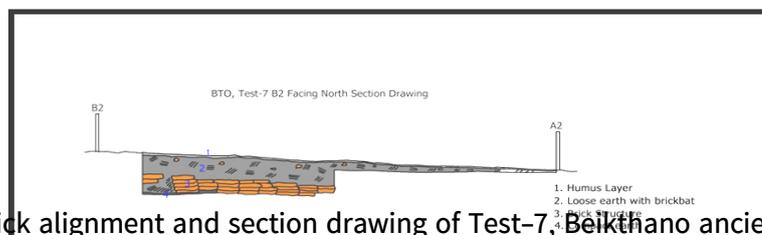
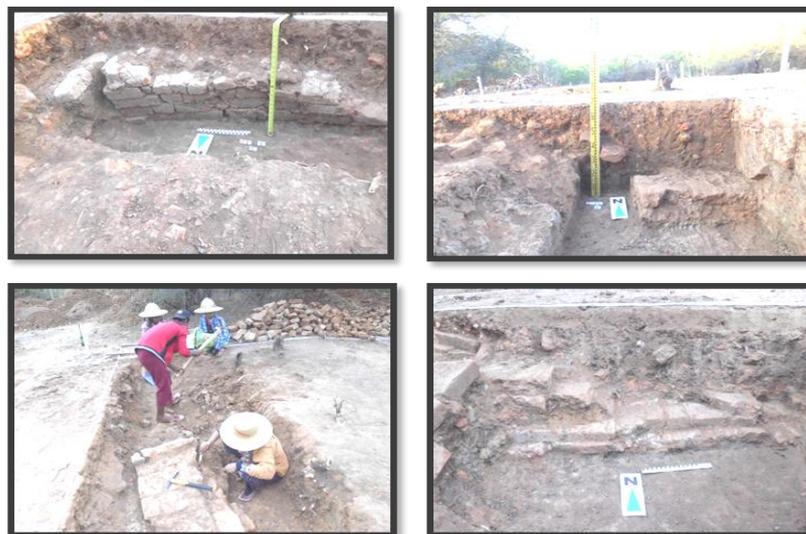
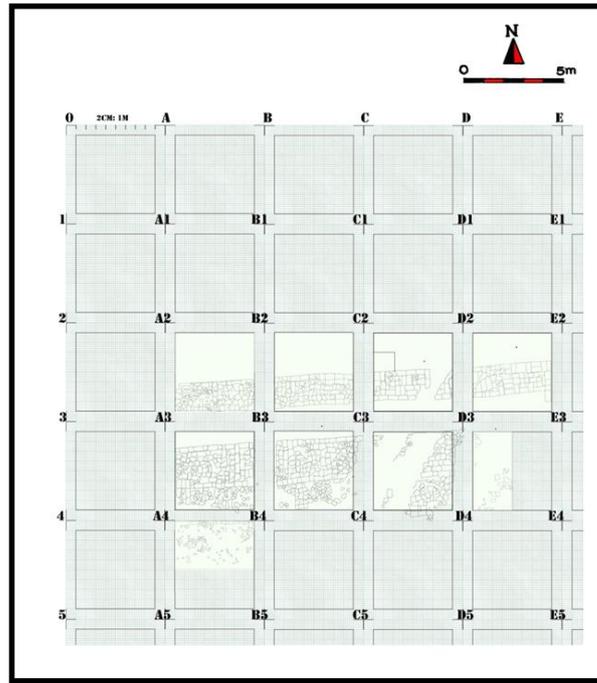
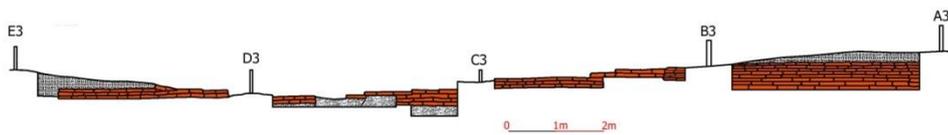


Fig.8 Brick alignment and section drawing of Test-7, Beikthano ancient city
 (Sourced from recently excavated reports: 2)





BTO(Southern City Wall), Test-8 Facing North Section Drawing



BTO (Southern City Wall), Test-8 Facing East Section Drawing

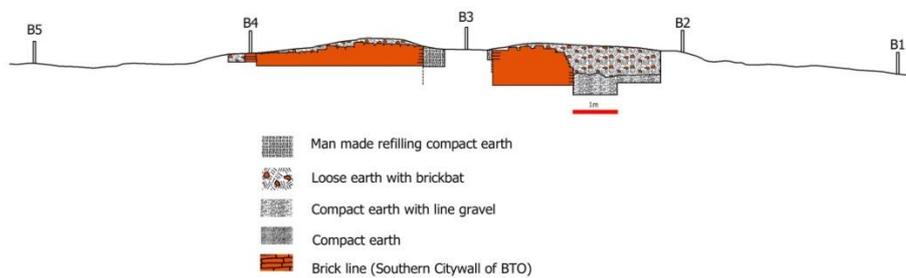


Fig.9 Section and plan drawing of Test-8, Beikthano ancient city
(Sourced from recently excavated reports: 2019)

