

Fortification in Protohistoric Period (With Special Reference to Rajasthan)

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Abstract: The concept of building forts dates back to protohistoric times. Early humans led a rough and nomadic lifestyle, constantly moving in search of food and shelter. Once humans began to settle, they transitioned from a life of wandering to one focused on gathering and eventually producing food. As humans started to produce surplus material goods, they began to view these possessions as personal property. The new sense of ownership gave rise to the need for protection — not just of oneself, but of one's belongings. The instinct for self-preservation led to the creation of early defence systems. Over time, these systems evolved into physical barriers such as fences, and eventually into more complex structures like fortresses. With the rise of settled communities, humans faced threats not only from wild animals but also from rival groups and fellow humans. This prompted the construction of even more advanced fortifications to ensure safety and survival. This article is based on the study of data on fortification in Rajasthan during protohistoric period.

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INTRODUCTION

Archaeological evidence suggests that forts in India date back to the pre-Harappan era. Sites like Kot Diji and Kalibangan show early examples of stone defensive walls. Prominent cities like Mohenjodaro and Harappa built large citadels. Archaeological findings indicate that these citadels provided both security and certain luxuries of urban life. One of the most remarkable protohistoric sites is Dholavira, which ranks among the five largest cities of the Indus Valley Civilization. Dholavira (Bisht 1991: 71-82, Jalajkumar 2018) was uniquely designed in the shape of a parallelogram and enclosed by a sturdy mud-brick fortification. Unlike the standard Harappan model of a citadel and lower town, Dholavira featured a citadel divided into two fortified sections known as the castle and the bailey. The Harappans utilized locally available materials for constructing these fortifications and other structures.

In the state, the Harappan Civilization, also known as the Indus Valley Civilization, extended across a vast geographical area, including parts of present-day Rajasthan. In Rajasthan, Kalibangan and Balathal, two potential archaeological sites provide evidence of urban planning, water management, and

importantly, fortification systems designed for defences and control. These fortifications were primarily constructed to protect settlements from invasions, floods, wild animals, and other environmental or any other social threats.

FORTIFICATION AT KALIBANGAN

The archaeological site of Kalibangan is located 310 km north-west of Delhi close to the now-dry bed of the river Ghaggar in the district of Rajasthan. It is strategically located at the confluence of the Sarasvati and Drishadvati Rivers. At present, the area around the settlement is dry and consists of sand-dunes. The site has three mounds (KLB I, KLB II and KLB III) and was excavated by Lal and Thapar from 1961 to 1969 (Lal *et al* 2003, 2015, 2020). Two periods were revealed, a pre-Harappan phase and a Mature Harappan phase. In period I the site consisted of one set of fortifications which were made up of simple walls ranging from 2 to 4 meter thick. However, during its mature phase, the river flowed past it and the land must have been very suitable for agriculture.

Kalibangan was divided into two parts: The citadel in the west and a lower town in the east. Both the citadel and the lower city were surrounded by a fortification wall in period I and II. The Early Harappan settlement inside the citadel was situated on the bend of the river beyond the active floodplain and was in the shape of a parallelogram about 250 meter north-south and 180 meter from east to west. The entire settlement right from the beginning of the occupation has been found to be fortified. It has been built over Natural soil. The citadel has its fortification and gate-way within which the house complex and lanes were situated.

The fortification wall running east-west was traced in the northern side. Towards the north-west corner of the mound, the turning of the fortification wall was traced. Here, the wall is oriented from north-east to south-west. Initially it was seen on plan that the Early Harappan wall with bricks measuring $10 \times 20 \times 30$ cm was widened by the addition of some courses of bricks measuring $10 \times 20 \times 40$ cm (i.e. thickness increased), but in the subsequent section, the original wall made of bricks measuring $10 \times 20 \times 30$ cm continued. This Harappan wall overrides a big hearth in this trench. The back of the Early Harappan fortification wall with five courses of bricks measuring $10 \times 20 \times 30$ cm was encountered. This wall was found resting on occupational layer. The outer face of the fortification wall at the north-west was traced. On the outer face only one course of brick was encountered. A good height of the back face with six to seven courses of bricks measuring $10 \times 20 \times 30$ cm were available.

In the north-western side where the entrance is situated and in the northern side the fortification wall has been found running substantially below the Harappan rampart. The Early Harappan defence has been traced with two constructional phases. The front face falls just in the line near the section looking west with five courses of bricks. The wall is 1.90 to 2.20 meter in width.

The fortification wall is also traced in the western and southern sides. In the eastern side it is traceable to a length of 30 meter. The brick size was $10 \times 20 \times 30$ cm. In the earlier phase the basal width was 3.90 to 4.00 meter. In the later it measured 3.90 to 4.20 meter. The extra thickness being added in the inner side. Both the inner and outer faces of the wall seem to have been originally plastered with mud, patches of it which were found preserved at many places. The fortification wall has eight to ten courses.

In the north-western side of the citadel there is an entrance which has been located having a gap of 2.70 meter in the fortification wall. Here, front and back of the pre-Harappan fortification which make square ends on either side to make an entrance or postern for the river side. It was found that the

intervening space was filled up with layers. This entrance belongs to the earlier phase. Then the width of the entrance was 1.90 – 2.20 meter wide. When a severe catastrophe occurred and it was blocked by packing material and the later phase was used with minor alterations.

The second period marked the arrival of the Mature Harappa phase and saw a whole new construction phase. The Harappans at Kalibangan used the eastern wall of the phase I settlement as the new (upper part) of the western wall of the lower town. This reduced the width by 60 meter and created a barrier that was twice as long as it was wide. Now the fortifications system included corner bastions, salient and defended gates. The northern part of the citadel consisted of residential buildings. This part of the citadel was also fortified with salient and bastions found on the north and west side. The northern part could be accessed from three entrances, each controlled by a bastion. In the southern part of the citadel, a series of separated mud-brick platforms were revealed. On top of these platforms clay-lined pits were found which are interpreted as fire-altars. Ceremonial bathing is also suggested based on finds of bath pavements and drains and a rectangular pit with animal bones in it was perceived as animal sacrifices. This all, plus the fact that no residential houses were found in the southern part of the citadel. It is interesting to note that the southern part of the citadel was more heavily fortified with corner-bastions and also with salient.

Entrance A, in the southern part of the citadel, is characteristic of a defended gate. The exact interpretation of the structures is difficult to ascertain but it seems that the additional structures at the both sides of the entrance made it more defensible.

Entrance C, also in the citadel area, is located between two salient. A nearby pathway and the approach through a stairway has suggest this entrance was a used for ceremonial reasons. This however does not mean that the entrance could be guarded and that the salient could have a military function. The lower city was also enclosed by a fortification wall and was made of mud bricks. The width of the wall ranged between 3.5 meter to 4 meter.

The western entrance (B) was supervised by a guard. The entrance (D) in the northwest of the lower town provided access to the river-front and was well flanked with bastions. No traces of other entrances were found, but this is probably due to the fact the southern wall is completely eroded and only a part of the eastern wall survived.

Excavations confirmed the presence of the Harappan fortification wall in all sides of the periphery of the Lower City (KLB-2). In the western side the fortification wall was exposed to a length of over 150 meter with a width varying between 3 meter and 3.9 meter. The maximum available mud-brick courses were fifteen. Two sizes of bricks, viz., 40 x 20 x 10 cm. and 30 x 15 x 7.5 cm. were found to have been used. It was discovered that the northern part the city wall had been built in a box-pattern, with mud filling inside. A gateway about the middle of the fortification wall on this side led to an east-west street. The width of the gateway is 3.7 meter. A room, measuring 2.5 x 2.5 meter was situated on the interior of the southern flank of the gateway, which seems to have been a guard-room.

At KLB-2, the fortification-wall was exposed to a length of over 110 meter on the northern periphery. Built in a box chamber pattern, it had a width varying from 4 to 9.10 meter, involving three to four structural phases. On the western side, the fortification-wall was traced. In the course of exposing the western wall in this part of the mound, a heap of baked bricks seemingly representing a brick robber's dump, was brought to light. On the eastern side, the remains of the fortification-wall could be traced. Persistent search, however, revealed a cutting-line, running in alignment with the outer toe of the existing fortification wall on this side, and available to a length of over 30 meter

beyond the extant remains of the fortification-wall. From its behaviour, it may be surmised that this line represents the builder's layout-mark for the fortification-wall.

On the southern side, except for washed mud-brick material, no remains of the fortification wall could be encountered. It is likely, therefore, that the wall on this side may have been completely eroded away. Its probable position, based on the pattern of street-planning within the city, has however, been accompanying plan. Two sets of trenches were laid to find out the relationship of the 'Fortification-Wall' with the houses and streets, one starting from the inner face of the segment of the western 'Fortification-wall', exposed and leading up to the first north-south street on the western side, and another starting from the inner face of the eastern 'city wall' and leading up to the first north south street on the eastern side. Though in the western part of the former cutting the lowest level revealed the presence of a few Early Harappan structures and pottery attesting to the extension of the Early Harappan habitation under the limits of the Harappan city, the adjoining square on the east had no sign of any Early Harappan habitation and the settlement began with the Harappan structures and repertoire. In this street, nine successive structural phases of the Harappans were encountered, each associated with a corresponding road level. A drain lined with baked-bricks and discharging into a soakage-jar placed below the working level of the road, was found in association with a house having baked-brick revetment. In the area excavated on the eastern side also, nine successive building phases were discovered. In both the areas, it was revealed that the 'city-wall' began with the earliest Harappan settlement. While the reasons for the apparent inconsistency between the alignments of the defences and the streets still remain to be fully ascertained - perhaps there was a change in the alignment of the streets in the course of time - it was at the same time observed that the house walls nearer the 'city-walls' on the eastern and western sides faithfully followed the alignments of the latter and the house-walls nearer the streets those of the streets themselves.

On the eastern side, where the level of the surrounding plain seems to have been lower, an additional ledge was seen at the foot of the fortification-wall. On this side, the fortification-walls were exposed to a length of over 30 m in the middle portion. It was also found that the fortification-wall on this side ran parallel to that on the western side on the one hand and the north-south running citadel-walls on the other, thus indicating a single conception of the city layout. Bastions on all the four corners measuring 15 x 10 and 18 x 10 m have been found.

The fortification wall of the KLB-2 mound has two entrances i.e. one on the northern river side and another for inter communicating with KLB-1 on the western side. Both the entrances have flanking bastions. The communicating entrance has guardrooms on both sides in the bastions. The river side entrance in the first phase connected with the north-south street and the staggered street.

There were quite a number of east-west lanes, which were staggered on plan and served perhaps as delivery on entrance lanes for the concerned house-blocks. The width of the thoroughfares and the streets was rigorously maintained, and fell within multiples of approximately 1.80 meter, pointing to a strict control under a central civic authority. To avoid damages from a busy vehicular traffic, at some of the street corners wooden fender-posts were provided. The only structures in the street were the rectangular platforms immediately outside some of the houses. The streets except in the late phase were un-metalled. The use of timber, scooped so as to give a U-shaped section, for house-drains is noteworthy. Area digging in the central part of the mound KLB-2 revealed house-plans. In this area also nine successive building levels were encountered. As already stated earlier, the house-block had a street each on the eastern and western sides and a lane on the southern side connecting

the two streets. The excavation uncovered the characteristic Indus chess-board plan with oblong blocks of houses, subdivided by lanes and thoroughfares. The main arterial thoroughfare, part of which was excavated to the natural surface, measured over 7 meter in width and, throughout the occupation was rigorously maintained without any serious alteration. The only encroachment on the street consisted of the curious rectangular troughs or bazaar platforms outside some of the houses. No street drains were found; at one place, however, successive drains from a house-block were seen to discharge into the street. The street except for the late phase was in un-metalled. On the other hand in front of some of the houses could be seen patches of mud-brick flooring, sometimes with brick-on-edge.

Four north-south thoroughfares were exposed in stretches in the southern margin of the city to show crossings with the earlier-known four east-west thoroughfares. It was found that there were two north-south thoroughfares for the lower city – one joining the three former east-west lines and the other two the more easterly ones. Reckoning from the west this would be the second east-west thoroughfare. At its crossing with the central north-south thoroughfares, remains of wooden fender-posts were found at successive levels of the street corner. Upwards of 70 meter further north another early east-west street was located and consequently exposed to a length of about 50 meter extending up to the eastern margins of the city. Unlike the former east-west thoroughfares, this street did not extend from one end of the city to the other but taking off from a centrally placed north-south thoroughfare ran across to the eastern part. A similar third north-south thoroughfare was maintained in alignment with a similarly sited east-west thoroughfare in the western part.

At the start of period II, the people of Kalibangan constructed a new fortifications system which showed a more military character than its previous phase. Now entrances were flanked with salients or bastions and bastions were present the citadel wall as well. The citadel mound at Kalibangan seems to be better military equipped than the lower town, mainly because it appears to have thicker walls and more and bigger bastions. Both mounds have defended gates and these military features indicate a probable military function of the fortifications.

FORTIFICATION AT BALATHAL

The ancient site of Balathal ($24^{\circ} 43' N$; $73^{\circ} 59' E$), discovered by V.N. Misra in 1964, is located on the eastern margin of Balathal village, 40 km east-north of Udaipur city and 6 km south of the town of Vallabhnagar in Udaipur District, Rajasthan (Misra 1967: 151). It is approached from Udaipur first by the Udaipur-Chittaurgarh highway and then, one km beyond Dabok airport, by a branch road.

The original mound, with an oval shape, measured approximately 165 meter (NE-SW) x 155 meter (E-W) and covered an area of nearly 20,000 square meter or five acres. However, nearly two-thirds of it, along the periphery, has been partially or wholly levelled by village farmers by converting it into agricultural land. Only at the centre is an area measuring about 90 meter (N-S) x 80 meter (E-W) and occupying nearly 5,600 square meter, still intact. This portion is common village land and is enclosed by a cactus fence. It is remarkably flat, with a gentle slope from north to south. The mound has a habitation deposit of seven metres. Systematic horizontal excavation at the site was begun in January 1994, jointly by the Department of Archaeology of the Deccan College Post-Graduate & Research Institute, Pune, and the Institute of Rajasthan Studies, Rajasthan Vidyapeeth, Udaipur, under the direction of Prof. V.N. Misra, Dr. Vasant Shinde and Dr. Lalit Pandey (Misra et al. 1995; Gogte 1996; Kajale 1996; Kshirsagar 1996; Thomas and Joglekar 1996; Misra 1997).

The cultural sequence at the site consists of two periods, namely Chalcolithic and Early Historic, with a considerable stratigraphic and chronological gap between the two. The fifteen radiocarbon dates, available so far, suggest a duration of 2800-1500 BCE for the Chalcolithic period and c. 200 BCE-200 CE for the Early Historic period. The Chalcolithic culture is characterized by three residential complexes divided by a wide street and a narrow lane. The houses are made of stone and mud brick with mud walls and containing underground and above ground silos, hearths and fireplaces, and numerous intact and broken saddle querns. A fortified enclosure in the centre of the settlement is made of massive mud and stone walls rewetted on both faces with stones and with bastions at the corners. The cultural material comprises copper and stone blade technology; Black-and-Red Ware, Tan Ware, Thin Red Ware, Thick Red-slipped Ware, Grey Ware, Buff Ware, and Reserved Slip Ware; terracotta and semi-precious stone beads and terracotta animal figurines. The economy was based on the cultivation of wheat, barley and mustard, and in addition to the domestication of cattle, buffalo as well as sheep and goat, the inhabitants' also practised hunting and fishing. The Early Historic occupation was restricted to a small area in the southern part of the mound. It is characterized by large-scale iron smelting and the manufacture of iron objects; small wattle-and-daub houses with open terracotta pipe drains; plain red and grey ceramics; a few heavily weathered copper coins; semi-precious stone and terracotta beads; terracotta animal and human figurines and sealings; and one example of a ring well. Large quantities of bones, mainly of domesticated animals, and of charred grains of urd and moong provide evidence of the subsistence economy.

In the first season (1993-94) two disconnected areas were chosen for excavation: one in the central part of the intact mound, and the other in the southern part of the mound. In the intact portion of the mound, located on the highest part was chosen as the index trench for determining the stratigraphy and cultural sequence of the site, and it was dug down very close to the virgin soil.

In the first season digging in these trenches was confined to the Early Historic period deposit. After the fortified enclosure was discovered, it was noticed that all trenches were located inside it. In all these trenches the first three layers, though variable in thickness, belonged to the Early Historic period. The fortified enclosure seems to have ceased to be used for the purpose for which it was constructed before the end of the Chalcolithic period. The abandoned enclosed space was subsequently used for storing cow dung which may have been used as fuel for smelting copper, baking earthen pots and cooking. The use of cow dung for firing pots is seen in pottery kilns. In all probability the cow dung was stored by the people living on top. The stratigraphy clearly shows that the cow dung was thrown from the walls of the fortified structure as the deposit slopes towards the central part of the enclosure. It is not clear whether the cow dung was burnt intentionally or by accident. Along the inner side of the northern wall of the fortified structure the deposit of burnt cow dung is about 2.30 meter thick.

The structures uncovered in the Chalcolithic levels can be divided into two categories: (1) fortified enclosure and (2) residential structures. Two phases of structural activity can be identified. In Phase I the structures are small and modest and consist of circular huts made of wattle-and daub. Their floors were made of rammed earth and plastered with mud mixed with straw and sometimes also with lime. The presence of post-holes around the periphery of the floors and of burnt pieces of clay plaster suggests that the superstructure consisted of round wattle huts plastered with clay. Phase II structures are large and complex and show a marked change in building materials and techniques. Stone, mud brick and mud were the principal materials employed in the construction of most of the structures of Phase II. The foundations were made of stone, and the walls of stone, mud brick and mud. The

roof was probably made of wooden beams and rafters, capped by mud in the case of structures with massive stone walls, and of thatch in the case of small structures of wooden posts and mud brick and mud walls. The stones were laid one above the other in a perfectly straight alignment and were joined together by mud mortar. The stone walls of some residential structures have become inclined towards one side, probably due to their weak foundations and the weight of the upper mud brick and mud walls and collapsed debris. The presence of burnt pieces of mud plaster in the excavated debris and the analogy of local rural houses suggest that the walls were plastered with clay and cow dung. Locally available granite and gneiss rocks were used for construction. The average size of the stone blocks and slabs is 25 cm long, 15-20 cm wide, and 10-15 cm thick, though in some cases considerably bigger pieces were used. Since stones are not available loose in the area, they had to be quarried from the living rock as is the practice today.

Further, since copper tools were too small and fragile for quarrying stone blocks, they were most probably detached from the living rock by heating it with fire and then creating cracks in it by pouring water over it. Stone hammers and copper and wooden wedges may have been used to loosen the blocks which were then minimally dressed except for straightening of the sides in some cases. The use of dressed stones is particularly noticeable in the case of the exposed eastern corner of the south-western bastion of the fortified enclosure.

The most remarkable discovery at Balathal is a fortified enclosure located in the central part of the mound. During the first two excavation seasons only the surface outline of this structure was exposed in several trenches and the inner face of the stone revetment of a part of the northern wall was exposed. The structure was roughly rectangular in shape though its eastern wall deviated outward and extended about eight metres beyond the outer limit of the southern wall. The average length of the E-W walls is 35 meter and of the N-S walls 27 meter. The width of the walls on the surface is 4.80 to 5.0 meter. The walls appeared to be made of mud and revetted with stones on the inner as well as outer side. The structure enclosed an area of over 500 square meter. Earlier this structure was designated as a mud rampart with stone revetments and was assigned to the early Iron Age (5th-6th century BCE) (Misra et al. 1995). This dating was proposed on the ground that the structure was buried beneath layer 4 which consisted of compact white ash and was sterile. This ash was thought to have been produced by the burning of a wooden superstructure which might have stood over the mud and stone walls.

Layers 1-3 had produced Early Historic material, including iron smelting furnaces and slag, a large number of iron tools, pottery, glass bangles, a ring well and a few copper coins. The stratigraphy inside the enclosure, was highly confused due to the dumping of cow dung and the presence of heavily vitrified ash inside it. Pieces of Early Historic pottery occurred in 'this ashy deposit down to layer (12). However, excavators carried out digging contiguous to the outer walls of the structure as well as inside the structure. The results have established beyond doubt that the fortified enclosure belongs to the Chalcolithic period. They further show that the structure was built during the middle phase of the Chalcolithic occupation and continued to be in use up to the end of the Chalcolithic period.

Trench H4 was dug in its southern half to a depth of 4.65 meter. The stratigraphy of the trench revealed that the top 13 layers rested directly against the standing wall of the enclosure, clearly showing that they were formed after the construction of the wall. Only the first three layers belonged to the Early Historic period whereas the remaining ones belonged to the Chalcolithic period. The outer face of the northern wall was exposed down to its base. The wall here has a height of 4.15 meter. It is

made of small flattish stones, with an average size of 20 x 15 cm, of locally available granite, and set in mud mortar. At regular intervals a course of relatively larger stones (45 x 15 cm) was added to the wall, obviously to strengthen it and prevent it from collapsing. Forty-five stone courses of the wall have survived. That the wall was weakening with the passage of time is indicated by the bulging in its central part. The bulging starts at 1.20 meter from the top and continues for downward 1.60 meter. The presence of pieces of thick clay plaster on the wall suggests that it was plastered with clay. The wall appears to have been repaired at least twice. The first phase of repair occurs at a height of 1.20 meter and the second at a height of 3.70 meter from the base. Further evidence of strengthening the wall is provided by the presence of a 2.70 meter long, strong and N-S oriented wall which is joined to the main wall in the southwest quadrant of trench H4. It is made of mud bricks and stands over a massive foundation of six courses of large stones (average size 60 x 35 cm) set in mud mortar. The wall has a height and exposed width of 1.80 meter each. However, its exact width cannot be determined as it extends into the undug western section. The wall has survived to a height of 75 cm. The wall slightly broadens towards its base. This side wall as well as the wall of the enclosure stand on a common mud and mud brick platform. This feature as well as the common technique employed in their construction suggest that both of them were built simultaneously.

Digging was done in the south-eastern quadrant of trench B, adjacent to the bastion, and in the southwest quadrant of trench B1, to a depth of 4.10 meter, to expose the total height of the southern wall of the enclosure and the bastion. The height of the wall is 3.21 meter and that of the bastion is 3.37 meter. Two phases of construction are visible. The first phase (2.85 meter high) in its lower portion runs almost vertical down to the base. Above the lower portion, the wall bulges 1.36 meter outward. The basal course of the wall is made of stones (average size 30 x 20 cm), and it rests on a mud and mud brick platform, 70 cm thick. The second phase is represented by a surviving height of 36 cm. To strengthen this upper portion, a 1.50 meter broad support wall was raised on the outer side. It is made of black clay and rests on a stone foundation. The outer face of the wall as well as the bastion broaden towards their bases. The bastion bulges 1.10 meter outward at a depth of 2.20 meter from the surface. It was observed that the outer face of the wall and the bastion were both constructed on top of layer (17) which represents the middle phase of the Chalcolithic period. Like the enclosure wall, both these architectural features stand on a 70 cm thick, strong platform of which the lower 45 cm is made of mud, mud brick bats and stone packing whereas the upper 25 cm is made up of two mud brick courses. The mud bricks are laid horizontally and are set in lime mortar. The fortified enclosure resembles the construction method followed by the Harappans.

With a view to understanding the fortification, the construction a part of the core of the western wall, between the outer and inner revetments, was dug down to its base in the north-eastern quadrant of trench D. The wall here has a height of 3.80 meter and is made of a mixture of mud, complete and broken mud bricks, and occasional stones, all of which were rammed hard. This portion of the wall has a width of 2.20 meter. It is supported on both sides by 1.60 meter wide stone revetments, thus raising the total width of the wall to 5.40 meter. The inner mud and mud brick core as well as the stone revetments were constructed on top of layer (15) which is made of pinkish clay and appears to have been intentionally laid to strengthen the foundation.

In the very first occupation layer two U-shaped ovens (chulhas) with a common central arm were found raised right over the bed rock. They are uniform in shape and size with a width of 35 cm and a height of 20 cm. The presence of these ovens and living floors right on the bed rock, shows

that the pioneering settlers occupied the central as well as the western part of the mound and that the fortification was raised over the habitation deposit.

An examination of the architectural remains, ceramics and other material equipment recovered from Balathal provide some evidence for the development of the Chalcolithic culture which can be divided in two phases. Phase A is represented by layers 21 to 18 and Phase B by layers 17 to 14. In Phase A the architecture is very simple, consisting of circular mud floors plastered with cow dung and lime. Over these floors probably huts of wattle-and-daub were raised, as indicated by burnt clods of mud. However, the discovery of two deep silos lined with grass and lime plaster shows that the inhabitants produced surplus food grains. This is significant because the area excavated of the early phase is very small. Associated with the silos and even outside of them a number of large, heavily worn querns were found. The use of stone and mud brick for construction was not known in this phase. There is a marked change in the size of structures and the materials and techniques used in their construction from the beginning of Phase B. The architecture of this phase is marked by the extensive use of semi-dressed and undressed stones and mud bricks. Four architectural phases have been identified in this cultural phase. Phase I is so far represented only by two small walls. Both these walls are made of stone. Phase II is the most prosperous. It is best represented by the fortified enclosure and multi roomed Complex. These are characterized by large and massive walls of stone, mud brick and mud. There is evidence of incipient planning of the settlement. The fortified enclosure is located in the centre of the settlement surrounded by residential quarters. Both these structures are indicative of considerable prosperity seen along with modest structures provide evidence of stratified economic and social organisation. Phases III and IV represent economic decline. The architectural evidence is supplemented by ceramic evidence. It is noticed, that some of the characteristic wares such as the Thick Red-slipped (coarse variety), Thin Red, and Black and-Red, were introduced by the original settlers. The pottery found in the last three layers (21-19) is quite coarse, thick in section, ill-fired and the majority of the vessels were handmade. A variety of shapes such as wide-mouthed deep carinated bowls, small narrow mouthed jars, storage jars with beaded rims, which are some of the fossil types in these wares, were introduced by the first farmers at the site. A gradual development is seen in these wares in terms of technology, shapes and designs. These wares introduced by the first farmers were gradually transformed into finer varieties in the middle phase of the Chalcolithic period (around 2400 B.C.). There is also a qualitative change in the raw material used and in the firing technique. Gradually, the pottery becomes thinner in section, better-fired and there is greater use of the wheel for fashioning the pots. The evidence of the origin and development of the Chalcolithic ceramic tradition is confined to the central and western parts of the mound. It appears that the initial occupation was confined to the central, western and probably northern parts of the mound, and the southern part was occupied at a later date. The evidence from the excavated areas suggests the entire site came under occupation only in the middle phase (layers 17 to 14) around 2400 B.C. This phase also witnessed a remarkable increase in prosperity, best exemplified by the architecture, probably as a result of contact between the Balathal people and the Harappans of Gujarat.

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