

## THE EGYPTIAN TOWN ON SAI ISLAND

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Sai Island, located just south of the Batn el-Hagar and therefore in a strategic position, is one of the most important Egyptian New Kingdom sites in Upper Nubia in modern Sudan (Fig. 1a). The European Research Council project AcrossBorders investigates Sai aiming to provide new insights on the lifestyle and the living conditions in New Kingdom Nubia thanks to new fieldwork and multi-layered research on the island.

Like the other major settlements in Upper Nubia (Kush), Sai Island falls into the category of the so-called Nubian temple towns – fortified towns built in the New Kingdom with an enclosure wall and a sandstone temple (Kemp 1972: 651-56; Morris 2005: 5). Temples as key elements of Egyptian towns are especially prominent in the Abri-Delgo Reach (Sesebi, Soleb, Tombos, Sai) and seem to be connected with the character of the area as a rich gold ore region (see Klemm & Klemm 2013: 9 and *passim*). A common feature for the specific urban layout of temple towns is the limited domestic space, with much of the room instead occupied by storage facilities and magazines, putting these sites into direct connection with the Egyptian administration of Kush. Until recently, most studies on these towns have therefore focused on the temples and their economic aspects from a broad perspective, leaving aside the specific microhistories of the major sites. Essential questions like the character and density of occupation still remain unclear (Budka 2015c: 41). Current excavations, especially in combination with landscape archaeology and various applications of archaeometry (e.g. Spencer et al. 2012; Budka 2015c; Spataro et al. 2015; Woodward et al. 2015), have rich potential to answer some of these open questions.

The AcrossBorders project has conducted fieldwork in the New Kingdom fortified town of Sai since 2013. New excavation areas within the town

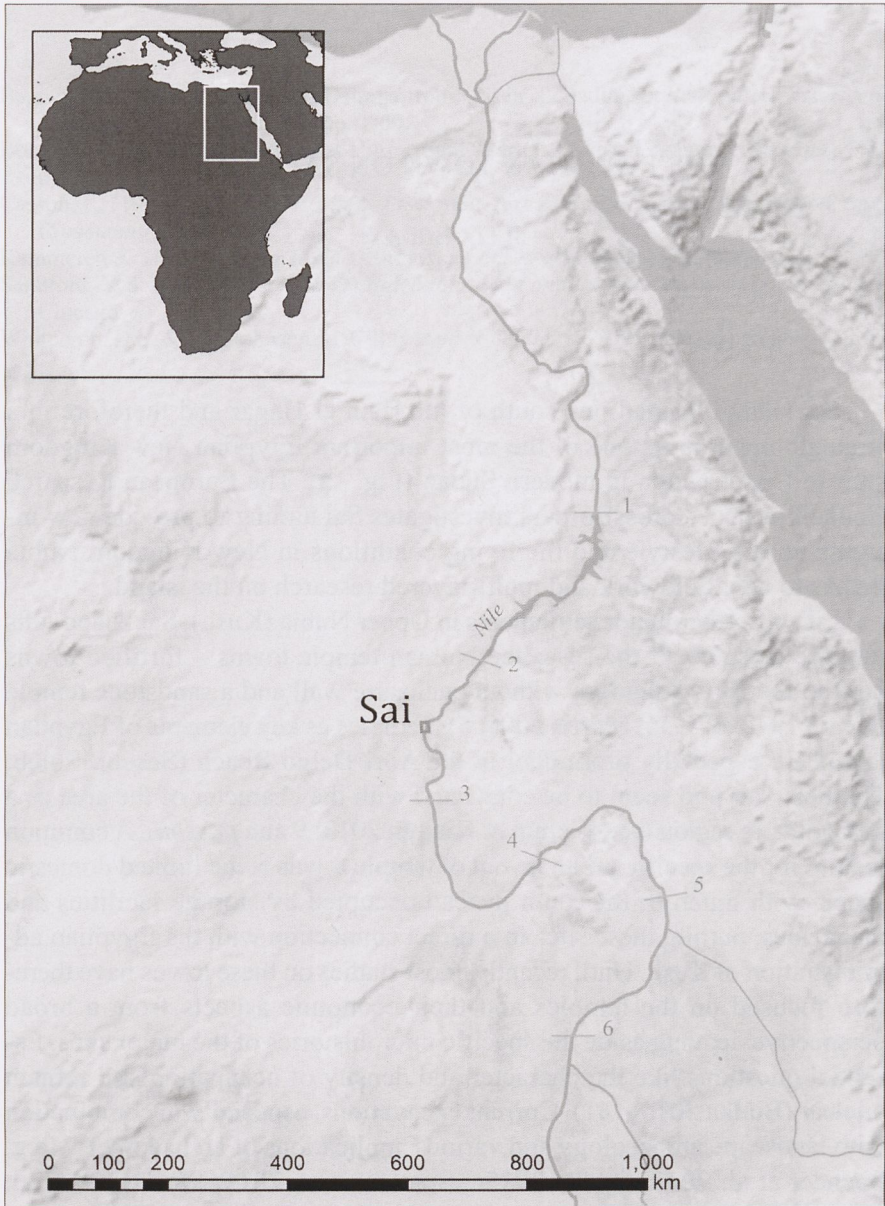


Fig. 1a – Map with location of Sai Island between the 2<sup>nd</sup> and 3<sup>rd</sup> Nile cataracts.



Fig. 1b – Location of Egyptian town on Sai Island.

were opened and added important knowledge concerning the general layout of the town, its evolution and changing character. Based on the fresh data from AcrossBorders' excavations, this paper presents an outline of the current state of knowledge regarding the evolution of the Pharaonic town on Sai Island and its potential for reconstructing the urban landscape of New Kingdom Kush. As will be shown in the following, the New Kingdom building activity on Sai can be understood as exemplary for settlement policy of Egypt during this age in Upper Nubia.

## 1. SAI ISLAND AND THE NUBIAN CAMPAIGNS DURING THE EARLY 18<sup>TH</sup> DYNASTY

Sai Island was probably the stronghold of the Kerma kingdom in the north (Geus 1996: 1166; Davies 2005: 51; Budka 2015a: 56) – a large community of Kerma Nubians is attested from the Kerma Ancien to Classique periods at Sai (see Gratien 1986). With this strong Kerma presence and because of attestations of Ahmose Nebpehtyra, Amenhotep I and Thutmose I, it is very likely that Sai was one of the key sites for the Egyptians within the so-called “re-conquest” of Nubia during the early 18<sup>th</sup> Dynasty (Davies 2005: 51; see also Török 2009: 183 and Gabolde 2011-2012: 118-20). The common view is that Sai was founded by Ahmose Nebpehtyra as a “bridge-head” (Davies 2005: 51; Budka 2015b: 80) towards the south and for the Egyptian campaigns against Kerma.

Thanks to textual sources, but also because of new archaeological finds, it is safe to assume that Egyptian influence remained unstable in early Thutmoside times in Kush; a Nubian rebellion is attested during the reign of Thutmose II (Bonnet 2012: 71; Zibelius-Chen 2013: 138; Valbelle 2014: 107). The Egyptian conquest of Upper Nubia came to an end with the final victory of Thutmose III against the kingdom of Kerma – the realm of Egyptian domination now reached as far as to the area of the Fourth Cataract and Kurgus (Smith 1995: fig. 6.1; Török 2009: 165; Zibelius-Chen 2013: 138). A change of power hierarchies and an increased Egyptian presence after the defeat of the Kerma kingdom can also be traced archaeologically at Sai.

## 2. THE EGYPTIAN TOWN OF SAI

The fortified Egyptian town was built on the eastern bank of the large island of Sai in the New Kingdom (Fig. 1b). This was probably the perfect

place on the island from a strategic perspective, especially for controlling river traffic and to facilitate the landing and loading of ships. The eastern part of the town steeply drops off towards the Nile, in some areas with a height difference of about 8 m. The sandstone cliff here was used also for quarrying purposes.

The town has the shape of a fortified settlement with an orthogonal layout, measuring 240 m north-south and 118 m east-west, with a total of 28,320 m<sup>2</sup> (2.83 ha). The main city gate was located on the western side, opening to a main east-west axis leading to the stone temple, Temple A. Despite of clear evidence of urban planning, there are several different sectors within the town, which contrast regarding their layout and dating (Budka 2015c) and will be presented in the following.

Prior to AcrossBorders' fieldwork, almost two thirds of the New Kingdom fortified town were unexcavated and a detailed assessment of the entire town's evolution was not possible (see Budka & Doyen 2012-2013: 181-82). With new fieldwork in various sectors and a detailed re-investigation of the southern area, a concise account of finds in all excavated parts highlights some of the significant aspects of this Egyptian temple town which are also relevant on a comparative level for other sites (Fig. 2).

### 2.1 *Southern Sector (SAV1)*

The southern part with a temple and a residential quarter datable to the mid-18<sup>th</sup> Dynasty was investigated by a French Mission in the 1950's and 1970's (Azim 1975; see now Adenstedt 2016). The following features were identified: the so-called governor's residence (SAF2) with a large columned hall (15.3×16.2 m) and mud-brick paving in the east; a central domestic quarter H comprising a cluster of five houses (H1-5); and a western quarter (SAF5), consisting of several rectangular storage rooms and circular silos (Azim 1975: 98, pl. 4; for new details see Adenstedt 2016). Parallels for such a layout can be found at other New Kingdom temple towns, especially at Buhen, Amara West and Sesebi (Kemp 1972: 651-53; Morris 2005: 195-97). As a common feature domestic space is quite limited, but much room is occupied by storage facilities and magazines. About one half of the area, the western side, is designated as storage area with several rows of magazines; the residential area is restricted to the eastern part with the smaller houses H1-H5 and the so-called governor's palace SAF2 (Adenstedt 2016; see Fig. 3).

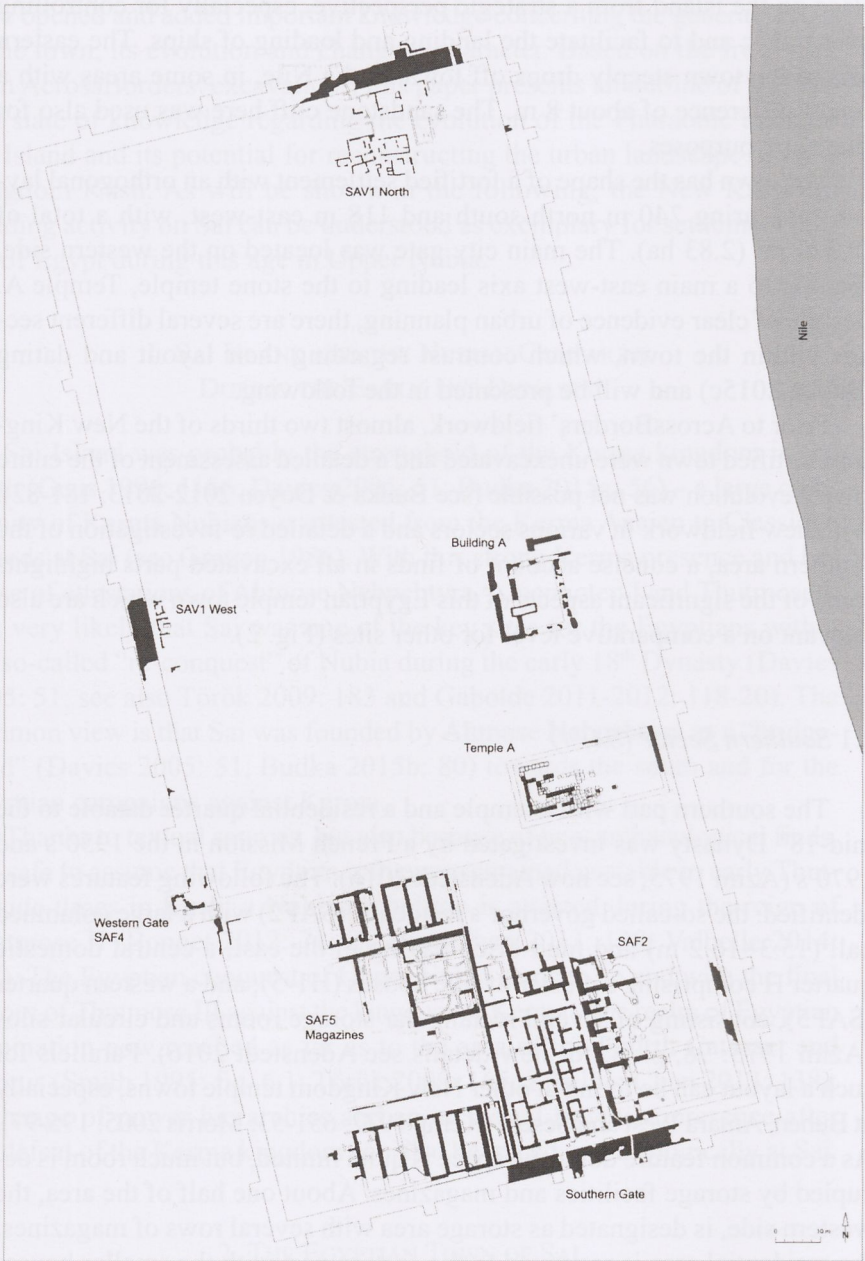


Fig. 2 – Map of the excavated parts of the New Kingdom town of Sai.  
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The small sandstone temple of Sai, Temple A, with a width of *c.* 10 m, finds close parallels on other Egyptian sites in Nubia. Several building phases under the reign of Thutmose III are attested by foundation deposits (Azim & Carlotti 2011: 39, 45) and a building inscription (S. 1) by viceroy Nehy (see, most recently, Davies 2014: 7-8).

Thanks to a new architectural study by Ingrid Adenstedt within the framework of AcrossBorders and based on a 3-D Laser Scanning campaign conducted in 2014, the southern sector of the Egyptian town of Sai was recently published as representative Pharaonic architecture in Nubia (Fig. 3; see Adenstedt 2016). The 3-D reconstruction of the bastioned enclosure wall includes all of the recent results from the AcrossBorders excavations (Fig. 4).

## *2.2 Northern Sector (SAV1 North)*

From 2008-2012, fieldwork was conducted by the Sai Island Archaeological Mission of Lille 3 along the northern enclosure wall, at a site named SAV1 North. Several building phases, from the early 18<sup>th</sup> Dynasty to Ramesside times and Post-New Kingdom eras were documented (Doyen 2009: 17-20; 2014: 367-75; Budka & Doyen 2012-2013: 168-71). The earliest strata at SAV1 North (Levels 5 and 4), which would be essential for identifying the founder of the town, are only scarce architectural remains and some occupational deposits. The initial sequence of Egyptian occupation on Sai is therefore hard to reconstruct in this area and mostly relies on the ceramic evidence. Most important at SAV1 North was the discovery of remains of the enclosure wall to a length of 39.32 m, being 4.26 m thick, belonging to Level 3 of the area. No gate was discovered in this part of the town wall. Thanks to stratigraphic evidence and pottery, this enclosure can be dated to the second half of the long reign of Thutmose III.

Interestingly, the architectural remains in sector SAV1 North adjacent to the town wall do not correspond to the general town planning visible in the southern sector. The structures are markedly different, but find close parallels in the new excavation area SAV1 West (2.4). The building units at SAV1 North include typical Egyptian tripartite houses, considerably smaller than the houses in SAV1, but similar to houses in Middle Kingdom Nubian fortresses (e.g. at Uronarti and Buhen). Other building units at SAV1 North do not find close parallels within Egyptian orthogonal settlements and are distinct in both size and ground plan from the houses in SAV1. Thus, SAV1 North nicely illustrates that within the town of Sai there are several different sectors that contrast regarding their layout.

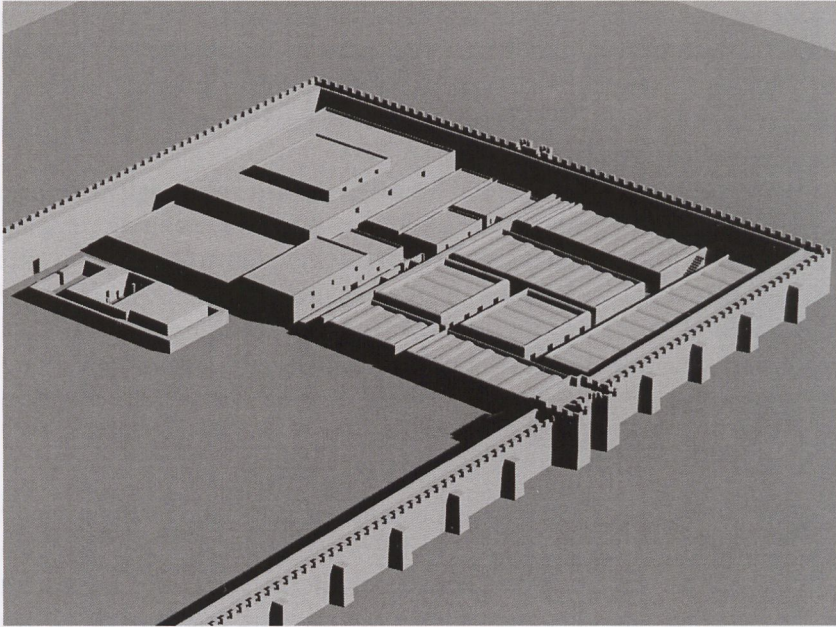


Fig. 3 – 3-D reconstruction of the southern part of the town of Sai (SAV1), view from the northeast. (©AcrossBorders, Ingrid Adenstedt 2016).

### 2.3 Northeastern Sector (SAV1 Northeast)

Of the fortification walls surrounding the town, remains on the north and south sides were known prior to AcrossBorders fieldwork. In regard to the eastern side, it was assumed that this part of the former city had collapsed into the Nile (Geus 2004: 115, fig. 89, based on the reconstruction by Azim 1975: 94, pl. II). Recent fieldwork and geological surveys of the sandstone cliff by AcrossBorders allowed a modification of this assessment. From the geoarchaeological point of view severe erosion in this part of the island is unlikely. This is mainly based on the observation of the low incision rate of the Nile (Draganits 2014: 22). Additional arguments are the existence of a broad Nile terrace east of the Pharaonic site and the presence of Nubian sandstone without indications for slope failure below the town<sup>1</sup>.

<sup>1</sup> AcrossBorders' geoarchaeological research was conducted by Erich Draganits in 2014 and by Sayantani Neogi in 2015. Many thanks go to Dietrich and Rosemarie Klemm for helping with questions about the harbour and quarry sites in 2016.



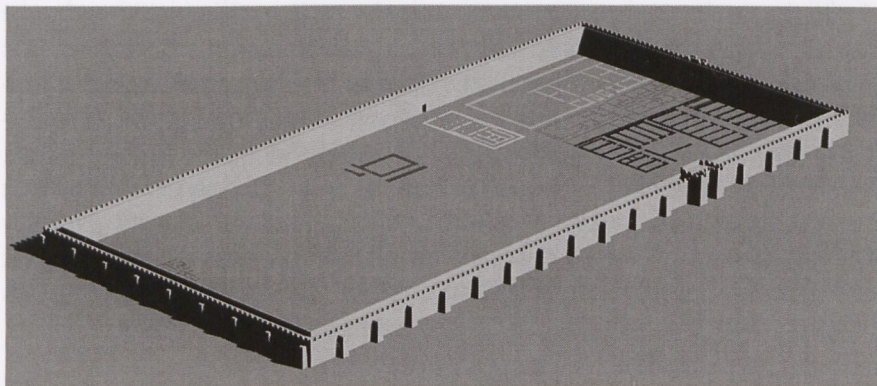


Fig. 4 – 3-D reconstruction of the fortified town wall of Sai.  
(©AcrossBorders, Ingrid Adenstedt 2016).

In 2016, a test trench labelled Trench 1 of site SAV1 Northeast was opened on the slight slope of the east side close to the presumed north-eastern corner of the town in order to test the geoarchaeological location of the town wall by excavation. Although only scarce remains of brick work were found, Trench 1 yielded indeed the remains of the city wall of Sai (Fig. 2). Associated pottery allows dating it to the mid-18<sup>th</sup> Dynasty. Thus, instead of an east-west extension of 140 m, as originally presumed by earlier scholars, only about 120 m can be accounted for the Egyptian town of Sai (cf. Budka 2015c; Adenstedt 2016).

#### 2.4 Eastern Sector (SAV1 East)

Aiming to achieve a more complete understanding of the layout of the 18<sup>th</sup> Dynasty occupation at Sai, a new excavation area was opened in 2013 (SAV1 East), 30-50 m north of Temple A at the eastern edge of the town (Fig. 2). The new squares are located where the outline of an orthogonal building was visible on the geophysical survey map from 2011<sup>2</sup>. The structure is aligned with Temple A and the main north-south street, following the orientation of the buildings in the southern part of the town (SAV1) and suggesting a 18<sup>th</sup> Dynasty date (Budka 2013: 80-81).

<sup>2</sup> The magnetometer survey was conducted by Sophie Hay and Nicolas Crabb, British School at Rome and the University of Southampton; I would like to thank Didier Devauchelle as the responsible director of the Sai Island Archaeological Mission for the possibility to use these data.

In the northern area of SAV1 East regular outlines filled with sand were revealed just below the surface. These are the negative outlines visible as anomalies on the magnetometer survey map. The Pharaonic building material, once forming the walls, has been removed almost completely, destruction events that can be dated to Medieval and Ottoman times. Excavations in 2013 and 2014 confirmed the orthogonal outline, alignment and date of a large structure labelled Building A of the mid-18<sup>th</sup> Dynasty (Budka 2013: 78-87; 2014: 28-37; 2015a: 62-63). Since 2015, work at SAV1 East focused on the western side and the south-western corner of this building as well as adjacent southern structures.

### Building A

Building A is built on terraces with the lowest part in the east and much higher levels in the west. The entrance rooms, of which only scarce traces have survived, were situated in the west, giving access from the main north-south street NS1. The key element of Building A is a large central courtyard (12.4×16.2 m) flanked by a lateral room or corridor towards the east and north. Although the state of preservation is very fragmentary, the outline of Building A is similar to SAF2, the governor's residence (Budka 2013: 85, fig. 12; 2014: 31).

Ceramics from the foundation trench of one of the walls of Building A allow a dating for the building into the 18<sup>th</sup> Dynasty, probably not earlier than Thutmose III and with several building phases (Budka 2013: 84). Building A at SAV1 East, therefore, belongs to the major remodelling of Sai during the reign of Thutmose III. It is contemporaneous with Temple A and the structures in the southern part of the town including SAF2.

### Cellars and Storage Installations

Dug into the natural gravel deposit, several large New Kingdom storage installations of a rectangular shape with a vaulted roof were discovered in SAV1 East. One was excavated completely in 2015, situated in Building A: Feature 15 yielded a large quantity of seal impressions, complete pottery vessels and other finds (see Budka 2015c). Two very similar cellars were found in 2017 in the southwestern part of the sector. Located close to the Temple A, these two new cellars (Features 83 and 85) discovered below the schist floors of large rectangular magazines further support the functional interpretation of SAV1 East. This part of the fortified town of Sai was

clearly related to the storage and distribution of products, thus possibly in close connection with the temple. SAV1 East, therefore, nicely ties in with the southern sector and exemplifies the main characteristics of Sai as planned Egyptian temple town. Parallels, presumably of a later date, can be found in the temple town of Sesebi (Blackman 1937: 149-50) and at Quban (Emery & Kirwan 1935: 36-37, fig. 12). The best preserved cellar at SAV1 East, Feature 15, illustrates furthermore the strong links between these storage installations and the local temple – the main phases of use of Feature 15 mirror the building phases of Temple A and its surroundings (Azim & Carlotti 2011-2012: 39-46; see Budka 2015c: 45).

### The Main Building Levels

Thanks to stratigraphic sequences, especially from Feature 15, several phases of use can be reconstructed for Building A and SAV1 East (Budka 2015a: 61-63; 2015c: 43-45). The early phase of Feature 15 reflects discoveries in the southern part of SAV1 East and around Temple A: prior to the construction of the main structures in this part of the town, Temple A and Building A, the area was used for storage facilities of various sizes and types (see Azim & Carlotti 2011-2012: 34-36). These installations might be directly related to the assumed landing place below the eastern side of the town and are relevant for understanding the nature of the Egyptian presence in Upper Nubia in the first half of the 18<sup>th</sup> Dynasty. The later phases of use at SAV1 East mainly comprise the mid and late 18<sup>th</sup> Dynasty, corresponding to the periods of building activity at Temple A (see above).

### 2.5 *Western Sector (SAV1 West)*

Searching for the town enclosure, its date, structure and stratigraphic position, a new site, SAV1 West was opened in line with the western town gate in 2014 (Budka 2015a: 63-65). Both the New Kingdom town enclosure and the contemporaneous remains on the inner side of this wall were investigated in SAV1 West. Despite much ancient destruction and disturbance, the complete thickness of the town wall (Feature 100) is visible (4.3-4.5 m) – its alignment follows exactly the plan as assumed by previous surveying of French colleagues (see Azim 1975: 94, pl. II, 120-22).

Remains of several mud-brick buildings were found toward the east of the town wall. According to the pottery, these date to the mid-18<sup>th</sup> Dynasty,

staying in use until the late 18<sup>th</sup> Dynasty and possibly also the early Ramesside period. In 2017, a building phase prior to the town wall was confirmed at SAV1 West: simple mud-brick structures comparable to finds in SAV1 North are earlier than the town wall. The limited exposed sections do not allow detailed information about this early building phase in the western town sector, but the comparison with SAV1 North suggests some simple style buildings for housing and workshop purposes.

All in all, the remains of 18<sup>th</sup> Dynasty structures along the enclosure wall in SAV1 West are very similar to findings in SAV1 North (see Budka & Doyen 2012-2013: 171-77). Both areas within in the Pharaonic town are markedly different from SAV1 and SAV1 East – there are no large structures of a possible administrative function and no substantial magazines but rather simple domestic buildings of small dimensions with oven installations, grindstone emplacements, small sized cellars and storage bins.

## 2.6 Summary

The Egyptian temple town of Sai can now be safely reconstructed as taking up a width of c.120 m, with traces of the eastern town wall located in sector SAV1 Northeast. Its urban planning and orthogonal layout is evident in the southern part and can also be traced in SAV1 East. However, a comparison of all excavated parts of the town area nicely illustrates that there are considerable difference between the individual sectors. Although this may partly be explained by a slight variance in dating, it seems to be a distinct feature of the site. Sai Island can therefore be taken as another example for an Egyptian walled town in which real developments may differ significantly from theoretical urban planning. As was recently illustrated by the neighbouring site of Amara West, a dissonance of houses from “standard types” was probably actually common in Egyptian towns (Spencer 2014: 201-202). Sectors SAV1 North and SAV1 West of Sai exemplify in particular short-term buildings and complicated processes within one town area which was part of a very dynamic world with remarkable changes during the New Kingdom.

The evolution of Sai Island in Pharaonic times and especially its development from the early 18<sup>th</sup> Dynasty to the Ramesside era can now be traced in its most important phases. As suggested by textual evidence and finds from the pyramid cemetery SAC5, Sai Island was the administrative center of Upper Nubia (Kush) during the Thutmoside Period and the predecessor

of Soleb and Amara West (Minault-Gout & Thill 2012: vol. 1, 415, fn. 27; Budka 2013: 78-87; 2014: 36; 2015a: 57; 2015b: 74-81). Sector SAV1 East seems to illustrate markedly the change of occupation with the long-term installation of the Egyptian administration on Sai after the defeat of the Kerma Kingdom by Thutmose III. Whereas in the early levels the sector has parallels with SAV1 North, probably associated with the role of a simple landing place, the character of the site changed in Thutmoside times: Building A and large sized cellars testify a close connection to the stone temple and can only be explained by the function of the town itself as administrative headquarter of the Egyptian occupation in Kush. For the understanding of the internal structure of the town, it is important that the remains at SAV1 East allow a reconstruction of the orthogonal layout known from the southern part of the town as extending further towards the north, beyond Temple A. As mentioned above, sectors SAV1 North and SAV1 West illustrate the dynamic elements within Egyptian town planning with slight alternations from standard plans of buildings.

### 3. AN EGYPTIAN MICROCOSM IN NEW KINGDOM KUSH

The new information from Sai seems to be highly relevant for understanding distinct phases of the Egyptian occupation in Upper Nubia. Evidence from Sai suggests that the Egyptian sites were largely depending on Egypt in the early 18<sup>th</sup> Dynasty – the region was centrally administered and supplies were brought from Egypt. Besides the importance of seizing Sai which was the northern stronghold of the Kerma state empire, the Egyptians seem to have preferred the site also because of natural resources of the area. Egypt's strong interest in gold and sandstone is well known and both materials are available in the region of Sai. Nubian gold was among the main Egyptian economic interests during a long time span (cf. Müller 2013: 74-79).

Reconstructing life on Pharaonic Sai has made considerable progress in the last few years and there is new information for the complex evolution of the Pharaonic town thanks to the application of diverse methods and extended fieldwork in the town, as well as in the main pyramid cemetery, SAC 5. The following three main phases are proposed for the development of the town (see Budka 2015c: 51).

Phase A. In the early 18<sup>th</sup> Dynasty, Sai was probably not much more than a simple landing place, a bridgehead and supply base for the Egyptians during the reigns of Ahmose, Amenhotep I and Thutmose I. This is sup-

ported by new archaeological evidence from SAV1 East and around Temple A. Scattered proof of Egyptian presence comes from the reign of Hatshepsut. The size and internal structure of the town at this early stage remains unclear; there is no sign of an enclosure wall, although occupation remains were discovered in 2017 at sector SAV1 West parallel to the town wall. One can only speculate that an earlier enclosure had similar dimensions like the one of Phase B.

Phase B. The 240×120 m large walled settlement with buttresses and the main city gate in the west was established (or maybe re-established?) during the time of Thutmose III, after the defeat of the Kerma kingdom. The site turns into an important administrative centre with an Amun-Re temple, a governor's residence and an administrative building (Building A). The dating of the foundation of the town wall of this phase is now confirmed thanks to recent work in SAV1 West. The enlargement of the site goes hand in hand with an increasing complexity with varied lifestyles amongst the inhabitants, suggesting a complex social stratification. Sai Island was now the administrative headquarter of Upper Nubia and continued to flourish until the reign of Amenhotep III.

Phase C. New finds from both the town site and cemetery SAC5 stress the importance of Sai during the 19<sup>th</sup> Dynasty. The island was still used by high officials including the deputy of Kush as burial place (Budka 2015c: 47-50). These fresh data add to our knowledge of events in early Ramesside times in Upper Nubia and illustrate that our present understanding is far from complete.

These phases based on the archaeological and textual evidence from Sai Island are of relevance in a broader context and will also allow a better understanding of the relations of Upper Nubia with Egypt. Processing the data from the excavations of the AcrossBorders project is ongoing and will hopefully allow reconstructing additional aspects of the urban landscape of Kush in the near future.

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