

AcrossBorders

Five seasons of work in the Pharaonic town, Sai Island

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Abstract

The European Research Council AcrossBorders project has conducted five seasons of archaeological fieldwork on Sai since 2013. New excavation areas within the town 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 is shown in the following, the New Kingdom building activity on Sai can be understood as exemplary for settlement policy of Egypt during this period in Upper Nubia.

Keywords: Sudan, Sai, Nubia, Kush, town, settlement, New Kingdom

Introduction

Sai Island, located in a strategic position just south of the Batn el-Hajar and thus between the Second and Third Cataracts (fig. 1), has been the focus of the European Research Council project AcrossBorders since 2013. The project aimed to provide new insights on the lifestyle and the living conditions in New Kingdom Nubia based on new fieldwork and multi-layered research on the island. Sai is one of the key sites to understand the settlement policy of New Kingdom Egypt in Upper Nubia, being a "bridge head" into the realm of Kerma (Davies 2005, 51; Budka 2015b, 40). Its significant role derives from a strong Kerma presence on the island prior to the New Kingdom (see Gratien 1986; Vercoutter 1986) and that both the town and cemetery of the 18th Dynasty can be investigated (Budka 2015a; 2017a, 71).

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, 651-656; Morris 2005, 5, see also Vieth in this volume). Temples as key elements of Egyptian towns are especially prominent in the Abri-Delgo Reach (Sesebi, Soleb, Tombos and Sai) from Thutmoside times onwards and seem to be connected with the character of the area as a rich gold ore region (see Klemm and 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 (Budka 2017b, 45). Until recently, most studies on these towns have therefore focused on the temples and their economic aspects from a broad perspective, leaving aside

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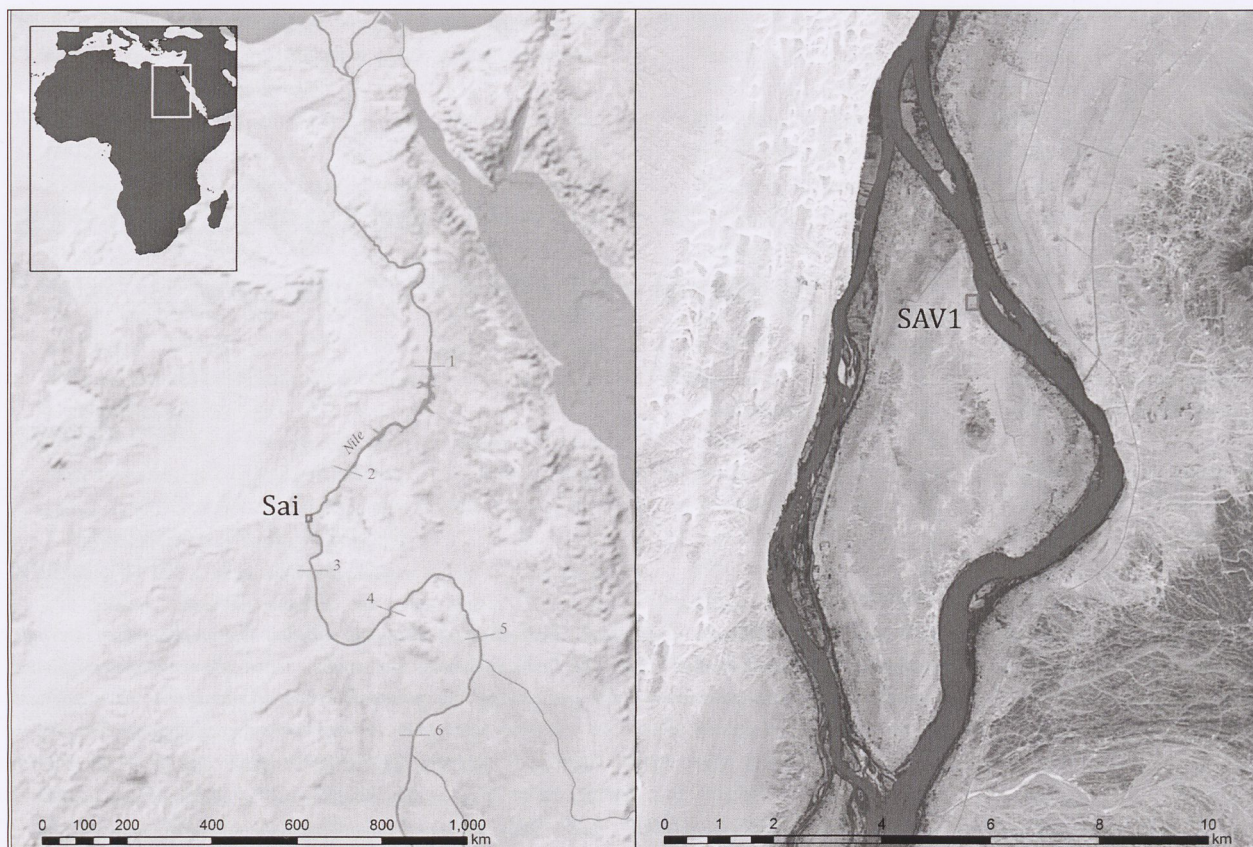


Figure 1. Location of Sai Island in Northern Sudan and map of the island with the location of the New Kingdom town.

the specific microhistories of the major sites. Essential questions like the character and density of occupation still remain unclear (Budka 2015b, 41). Current excavations, especially in combination with landscape archaeology and various applications of archaeometry (e.g. Spencer *et al.* 2012; Budka 2015b; Spataro *et al.* 2015; Woodward *et al.* 2015), have rich potential to answer some of these open questions.

The AcrossBorders project has conducted five seasons of archaeological fieldwork on Sai from 2013 to 2017. Three new excavation areas within the town were opened (SAV1 East, SAV1 West and SAV1 Northeast) and added important knowledge concerning the general layout of the town, its evolution and changing character which will be highlighted in the following. The archaeological excavations were complemented with kite aerial photography, structure from motion approaches, terrestrial 3D laser scans, geoarchaeological surveys, micromorphological soil sampling and various archaeometric analyses of diverse materials (Adenstedt 2016; Budka 2017d; see also Fera and Geiger in this volume) which allow some new insights on the layout and function of the site.

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. 1). 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 (see below on sector SAV1 Northeast). The eastern part of the town steeply drops off towards the Nile, in some areas with a height difference of about 8m. The sandstone cliff here was also used for quarrying purposes (Budka 2017b, 49).

The Egyptian town of Sai has the shape of a fortified settlement with an orthogonal layout in a south-north direction, measuring 238m north-south and c. 118m east-west, with a total of 27,600m² (2.76ha) (Adenstedt 2016, 24, fig. 7; Budka 2017a, 71; see also Adenstedt in this volume). 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 2015b; 2017b) and will be presented in the following.



Figure 2. Location of AcrossBorders excavation sectors in the New Kingdom town of Sai.

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 and Doyen 2013, 181-182). With new fieldwork in various sectors and a detailed re-investigation of the southern area, a concise account of finds in all excavated parts (fig. 2) highlights some of the significant aspects of this Egyptian temple town, which are also relevant on a comparative level for other sites.

Southern sector (SAV1)

The southern part with a temple and a residential quarter datable to the mid-18th Dynasty, labelled as SAV1, was investigated by a French Mission in the 1950s and 1970s (Azim 1975; Adenstedt 2016). The following features were identified as being contemporaneous and from Thutmoside times (fig. 3): the so-called governor's residence (SAF2) with a large columned hall (15.3 x 16.2m) and mud-brick paving in the east; a central

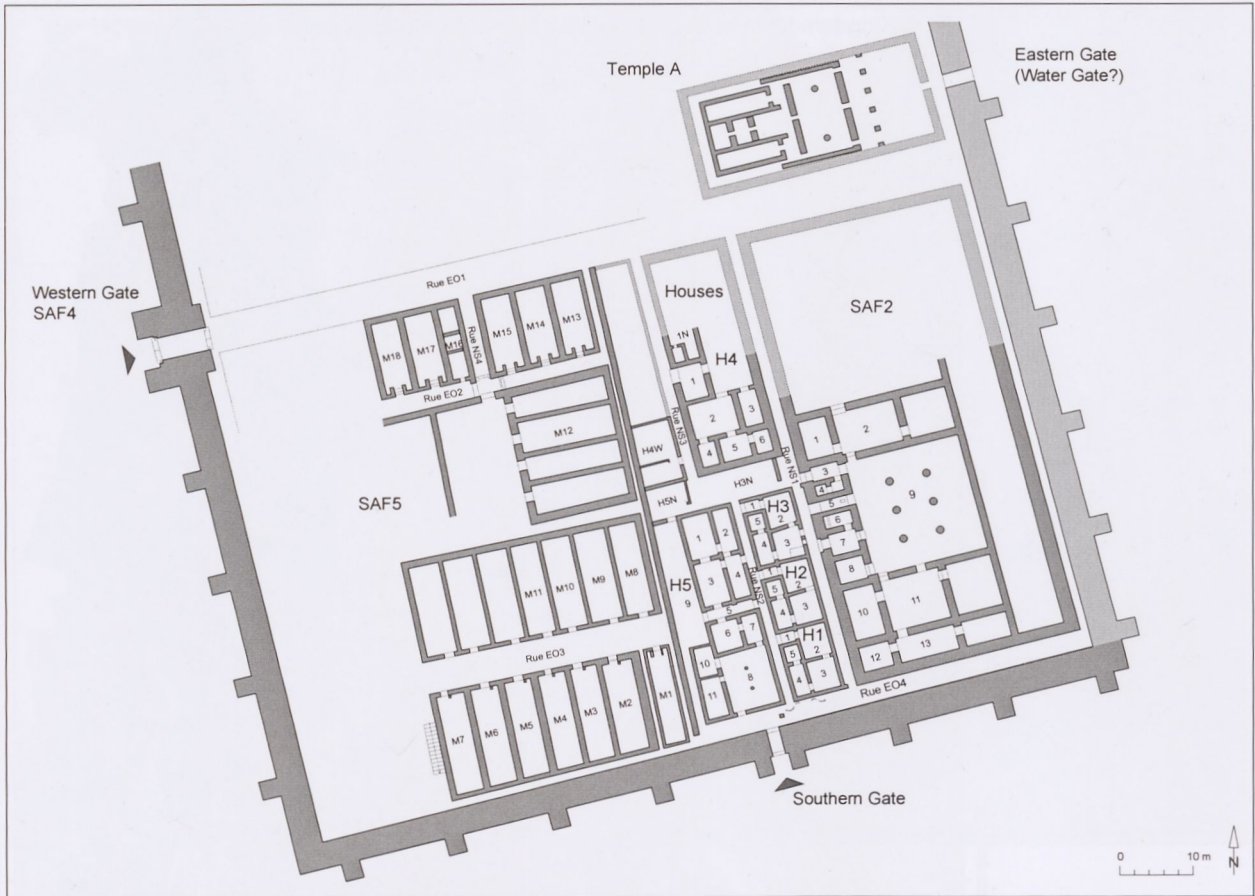


Figure 3. Reconstructed plan of SAV1 by Ingrid Adenstedt (© AcrossBorders).

domestic quarter H comprising a cluster of five houses (H1-H5); 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, 651-653; Morris 2005, 195-197). Domestic space is limited at all of these sites, whereas much room is occupied by storage facilities and magazines. At Sai, about one half of the area, the western side of SAV1, 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; Budka 2017b, 49).

The small sandstone temple of Sai, Temple A, with a width of c. 10m, finds close parallels on other Egyptian sites in Nubia (in particular Kumma). Several building phases under the reign of Thutmose III are attested by foundation deposits (Azim and Carlotti 2012, 39, 45) and a building inscription (S. 1) by viceroy Nehy (Davies 2014, 7-8, with references). Some additions were undertaken by viceroy Usersatet during the reign of Amenhotep II (Azim

and Carlotti 2012, 46-47; Gabolde 2012, 137; Davies 2017, 145). Amenhotep III was responsible for the final construction and decoration phase of Temple A (Azim and Carlotti 2012, 47, pl. XVI-b) which was primarily dedicated to Amun-Ra, but also to 'Horus the Bull, Lord of Ta-Seti'. The identity of 'Horus the Bull, Lord of Ta-Seti' has been a matter of divergent discussion among scholars. Florence Thill has argued that this deity is not a local Horus deity as commonly believed, but rather a manifestation of Thutmose III himself (Thill 2016, 263-304). Following this identification, Temple A illustrates a close connection of the temple cult on Sai to kingship and the living ruler (Budka 2017c, 34). The general invocation of divine royalty and the cult of royal ancestors are evident at Sai from the very beginning of the New Kingdom since two heb-sed statues of Ahmose Nebpehtyra (Khartoum SNM 3828 & 63/4/4) and Amenhotep I (Khartoum 63/4/5) were found on the island (see Gabolde 2012, 118-126; Budka and Doyen 2013, 170, with further references). The architectural context in which these royal statues were originally set up is still debated, but a small mudbrick chapel, probably a *hwt-ka* in the general temple area, seems the most likely (Budka 2015a, 76-80; 2017c).

Thanks to a new architectural study by Ingrid Adenstedt within the framework of AcrossBorders and based on a 3D 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). Her reassessment of SAV1 has produced several new results, which are relevant for a better understanding of the town layout. Especially relevant are here (Adenstedt 2016, 69-70): a) the area SAF3 by Azim is not part of the original Pharaonic architecture but of later date (which is significant for the reconstruction of the eastern town enclosure, see Adenstedt in this volume); b) a clarification of the plan of the storage area SAF5 with some newly reconstructed magazines; c) a 3D reconstruction of the houses H1-H5 and the governor's residence SAF2. The 3D reconstruction of the bastioned enclosure wall is mainly based on comparative studies and still raises some questions (see Adenstedt in this volume).

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 18th Dynasty to Ramesseid times and post-New Kingdom eras were documented (Doyen 2009, 17-20; Budka and Doyen 2013, 168-171; Doyen 2014, 367-375; Budka 2017d). 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 which attests to an Egyptian presence already during the reigns of Ahmose Nebpehtyra and Amenhotep I (Budka 2016). Most important at SAV1 North was the discovery of remains of the enclosure wall at a length of 39.32m, being 4.26m thick and belonging to Level 3 of the area. No gate was discovered in this part of the town wall. Thanks to stratigraphic evidence and the pottery, this enclosure can be dated to the second half of the long reign of Thutmose III (Budka and Doyen 2013, 168-171; see also Adenstedt in this volume).

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 (Budka 2017d, 171-175). The structures are markedly different, but find close parallels in the new excavation area SAV1 West (see below). 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 buildings units at SAV1 North do not find close parallels within Egyptian orthogonal settlements,

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 and presumably also concerning their function (Budka 2017d, 176-177).

Northeastern sector (SAV1 Northeast)

Of the fortification walls surrounding the town, remains on the north and south sides were known prior to AcrossBorders fieldwork (see Adenstedt in this volume). In regard to the eastern side, it was assumed that this part of the former city wall had collapsed into the Nile (Geus 2004, 115, fig. 89, based on the reconstruction by Azim 1975, 94, pl. 2). Recent fieldwork and geological surveys of the sandstone cliff by AcrossBorders allowed a modification of this assessment (Budka 2014, 60; 2015b, 41), evaluating severe erosion in this part of the island as highly unlikely, 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.¹ In line with this, the steep cliff at the north-eastern corner of the town, site 8-B-522, clearly functioned as mooring area in Christian times, as is well attested by medieval graffiti and mooring rings carved out of the rock for tying ships' ropes at a very high level of the cliff (Hafsaas-Tsakos and Tsakos 2012, 85-87). This usage might go back as early as the New Kingdom (Budka 2017a, 71). A Pharaonic landing place at 8-B-522, presumably at a lower level than the Christian one,² is therefore likely, suggesting that the eastern perimeter wall was located further towards the west and might be traceable after all.

In this respect, "negative linear anomalies" visible on the geophysics survey map from 2011 (Budka 2017e, 429, fig. 1) and tentatively identified as a possible extension of the north-south street, Rue NS1 of Azim (Crabb and Hay 2011, 16;³ on this street see most recently Adenstedt 2016, 32) were of interest. In 2016, a 15 x 3m test trench labelled Trench 1 of site SAV1 Northeast was opened by AcrossBorders above these anomalies on the slight slope of the east side close to the presumed north-eastern corner

1 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.

2 The Christian graffiti are commemorating 'exceptional high waters of the Nile' (Hafsaas-Tsakos and Tsakos 2012, 86, with further references).

3 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.

of the town (see fig. 2). Although only scarce remains of brick work were found, Trench 1 indeed yielded the remains of the city wall of Sai, allowing the reconstruction of the eastern side with a width of c. 4.3m, corresponding to the previously unearthed parts of the town enclosure (see Adenstedt in this volume). Associated pottery suggests a dating of the remains in SAV1 Northeast to the mid-18th Dynasty (Thutmoside). Based on this new discovery, the fortified New Kingdom settlement measures 242m north-south and only between 118-120m east-west, giving a total town area of 27,600m² (2.76ha) (Adenstedt 2016, 24, fig. 7).

Eastern sector (SAV1 East)

Aiming to achieve a more complete understanding of the layout of the 18th Dynasty occupation at Sai, a new excavation area was opened in 2013 (SAV1 East), 30-50m north of Temple A at the eastern edge of the town (fig. 2). The squares are located where the outline of an orthogonal building was visible on the geophysical survey map from 2011 (see Crabb and Hay 2011). This structure seemed to be 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 an 18th Dynasty date (Budka 2013, 80-81). Fieldwork in SAV1 East was conducted from 2013 to 2017, opening four different squares with various extensions (fig. 4). The area provides essential new information on the city map of Sai.

The earliest remains at SAV1 East

Early occupation remains with a number of small huts, workshop-like structures and storage facilities were unearthed by Michel Azim in the zone between Temple A and the new site (SAV1 East). In his publication of the structures, Azim could show that the remains are earlier than the stone temple, thus pre-dating Thutmose III (Azim and Carlotti 2012, 34-36). Azim proposed a dating prior to the New Kingdom, based on Kerma ceramics found associated with the structures and through comparison with similar structures at the Kerma village of Gism el-Arba (see Gratien 1995, 5-65; Gratien *et al.* 2003, 29-43; 2008, 21-35 and Azim and Carlotti 2012, 35, note 59; see also Budka 2017e, 431-432).



Figure 4. Sector SAV1 East, status of 2017.



Figure 5. Overview of southern part of sector SAV1 East (status 2015) with Feature 57 in Squares 2A and 4A. Note its parallel alignment to the later foundation trenches of Building A visible on the top (photo: M. Fera, AcrossBorders project).

New evidence from SAV1 East allows linking the earliest levels there with this horizon around Temple A, thought to be of Kerma origin. A small plaster coated storage bin (Feature 14) still held two complete pottery vessels *in situ*, permitting a dating to the early 18th Dynasty, excluding the Second Intermediate Period (Budka 2013, 82; 2017e, 432-433, figs. 4-5). Several fragments of Kerma vessels have also been found. Based on the associated Egyptian material, these Kerma sherds can be dated to the early 18th Dynasty (maximum up to Thutmose III). Consequently, it has to be stressed that there is no evidence for pre-18th Dynasty occupation at SAV1 East or around the Temple A. In this part of the New Kingdom town, there is no Kerma level predating the Egyptian occupation (Budka 2017e, 432). The earliest remains in the as yet exposed parts of the town, comprising primarily workshop-like structures and storage facilities, date back to the time span of Ahmose Nebpehtyra up to Thutmose I.

As was already mentioned, these early remains around Temple A and in the southern part of SAV1 East yielded Egyptian material as well as a considerable amount of Nubian pottery, in particular Kerma Classique black-topped wares. It is highly significant that this horizon of early New Kingdom Sai also seems to exhibit a mixture of different building techniques. As will be shown below, the

dominant features excavated in SAV1 East are of typical Egyptian architecture and compare well to SAV1, the southern part of the town, mainly comprising mudbrick walls, mud floors as well as schist pavements and large vaulted magazines and cellars. However, one fragmentary preserved part of a wall located in the southern part of SAV1 East raises several questions. Although the state of preservation is rather poor, a sequence of the walls and floors could be established in Square 4 and Square 4A. Feature 57 is a dry-stone terracing wall, measuring 5.40 x 0.60m, located in Squares 4A and Square 2A (fig. 4). Unfortunately, it disappears in the southern baulk of SAV1 East (Square 4A). It runs almost east-west and was set against the natural pebble which is sloping towards the south in this part of the site. Feature 57 is comprised of irregular stones, whereby mainly sandstone fragments were used (various sizes from 20 x 24 x 15cm to 50 x 25 x 20cm). On top of the stones, some mudbricks were laid in a row of headers. Only in the western part of Feature 57 two layers are preserved, suggesting the size of the bricks (33 x 15 x 10cm). Because some mud pavements are preserved and connected to the dry-stone wall, the relative dating of Feature 57 is secure: it is earlier than Building A (see below) and thus most probably dates to the early phase of SAV1 East, Ahmose Nebpehtyra up to Thutmose I (Budka 2014, 61-62).

The mudbricks on top of the stones of Feature 57 are badly preserved (fig. 5) – their appearance is very different from regular freestanding bricks, also well attested in SAV1 East. For me, a relation to the *galoo*s technique of the Kerma culture is very likely. In no other parts of the New Kingdom town did we find any dry-stone walls in combination with mud. This building technique is, however, very well attested at Kerma itself (see Bonnet in this volume) and might represent the material evidence for cultural entanglement in the early 18th Dynasty on Sai.

To conclude, the earliest remains at SAV1 East date to the early 18th Dynasty, most likely to the reign of Ahmose Nebpehtyra (cf. Budka 2016). The Kerma sherds discovered at SAV1 East are associated with early 18th Dynasty material and they do not attest a pre-New Kingdom activity at the site. The area unearthed by AcrossBorders in the southern part of sector SAV1 East as well as the domestic zone excavated around Temple A by Azim can, therefore, be safely interpreted as part of the newly founded Egyptian town. Remarkable at this early stage of the town is the presence of Nubian pottery and maybe also a Nubian influence in building technique which are probably associated with Kerma Nubians living on the island and getting involved with the Egyptians from the very beginning of the new settlement onwards. It is furthermore striking that the general pattern of this early phase (e.g. Feature 57, but also Feature 15 in its early stage, see below) already mirror the east-west orientation of the walls of later buildings of purely Egyptian style.

Building A

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 (Budka 2017e, 429, fig. 1). The Pharaonic building material, once forming the walls, had been removed almost completely, destruction events that can be dated to medieval and Ottoman times. The upper levels of SAV1 East are dominated by a destruction layer with mudbrick fragments, charcoal, pottery and worked stones. This layer was up to 40–50cm thick and yielded abundant stone tools, lots of ceramics and other materials. The material is of a mixed character and the latest finds date to the Ottoman Period. A large percentage of 18th Dynasty ceramics indicates that the later destruction is situated directly on the Pharaonic remains.

Excavations in 2013 and 2014 confirmed the orthogonal outline, alignment and date of a large structure labelled Building A of the mid-18th Dynasty (Budka 2013, 78–87; 2014, 62–63). Since 2015 work at SAV1 East focused on the western side and the southwestern corner of this building as well as adjacent southern structures.

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 NS 1. The key element of Building A is a large central courtyard (12.4 x 16.2m) flanked by a lateral room or corridor towards the east and north. The most interesting find was a subterranean room, Feature 15, located in this courtyard (see below). Although the state of preservation is in general very fragmentary, the outline of Building A could be reconstructed and is similar to SAF2, the governor's residence (Budka 2013, 85, fig. 12; 2017e, 435).

Ceramics from the foundation trench of one of the walls of Building A allow a dating for the building into the 18th 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 2016, situated in Building A: Feature 15 (5.6 x 2.2 x 1.2m) yielded a large quantity of seal impressions, complete pottery vessels and other finds (see Budka 2015b). Ashy deposits, large amounts of charcoal, hundreds of doum-palm fruits, abundant animal bones with traces of burning, more than 80 almost intact vessels and c. 200 remains of scarab seals on clay sealings make Feature 15 a context rich in information. The sealings are of special importance, being the first corpus of sealings ever found within the New Kingdom town of Sai and comprising a large number of royal names (Amenhotep I, Hatshepsut and Thutmose III) as well as various floral decorations in a style typical for the Second Intermediate Period (Budka 2015b, 45).

The excavations of Feature 15 were completed in 2016 and work subsequently focused on remains unearthed in Squares 4B, 4B1 and 4C, the westernmost area of SAV1 East. In the southwestern corner of Square 4C, a large sandstone block was found dumped between mudbrick debris. Adjacent to the east of this block, the last remains of a large mudbrick wall were unearthed, running almost north-south and thus with a similar alignment to Building A. Still attached to the small section of this wall was a plate of schist and large quantities of plaster, representing *in situ* remains of a large room with a schist pavement (Budka 2017a, 73). Because of its position in the southwestern corner and the baulk of Square 4C, these remains required an extension in order to be contextualised. This was the chief aim of the 2017 season at SAV1 East. A new Square 4D was added into the southwestern corner of Square 4C, comprising 6.5 x 9m and therefore including anomalies

visible on the map of the geophysical survey from 2011 which also needed to be tested (Budka 2017a, 73-75).

The upper levels of the new Square 4D were dominated by a substantial amount of collapsed mudbricks and schist and plaster fragments. These are obviously the remains of a large area originally covered by a schist pavement, heavily disturbed during later times, as was already implied by the remains in Square 4C. Similar to other areas in SAV1 East, the material is of a mixed character and although most of the ceramics date to the 18th Dynasty, medieval and Ottoman material is also present. The large percentage of 18th Dynasty ceramics indicates that the later destruction is situated directly on the Pharaonic remains, as was clarified in other parts of SAV1 East. A sandy depression was soon noticed in the southern part of the new square. During excavation, it was identified as a large, rectangular cellar with an east-west alignment (Feature 83), filled with mixed material, especially mudbricks, worked stone and schist slabs in its upper part. The structure measures 3.3 x 1.8m and has a preserved height of 2m. Feature 83 was cut into the natural ground, which consists of pebble terraces. Its rectangular outline was lined with mudbricks, the roof was formed by a vault. Of the latter, the lower part and the negative of the eastern narrow side have survived. A substantial amount of collapsed bricks was found in large piles on top of the floor. Interestingly, most of the bricks show marks (parallel longitudinal grooves), known from other contexts in the New Kingdom town (Budka 2017a, 73). It is remarkable that these contexts with such brick marks (the northern enclosure wall, building units of Level 3 at SAV1 North and structures from the southern sector, see Azim 1975, 102, pl. 6; Budka 2017d, 24-26) can all be dated to Thutmoside times. Such a dating for Feature 83 is further supported by smashed pottery vessels which were found below the collapsed bricks on the floor. They clearly belong to the latest phase of use of the structure and can be dated to the mid-18th Dynasty (Budka 2017a, 73). Therefore, Feature 83 is comparable to the considerably larger Feature 15, also regarding its phases of use (see Budka 2015a, 43-45).

Another cellar, Feature 85, was discovered in 2017, situated in the northern part of Square 4D, next to Feature 83 (fig. 4). It is much better preserved than the southern cellar, and has the same east-west alignment, of similar dimensions (3.7 x 1.5 x 2.05m) and the same building technique. Whereas the upper part of Feature 83 was extensively disturbed, Feature 85 is clearly situated below the schist pavement unearthed in Square 4C – a large amount of collapsed schist slabs was recovered in its eastern part, complementing the slabs still *in situ* within the pavement above. Its central part is still intact including the vault, but the eastern and western ends have collapsed, including the sidewalls. The corresponding mudbricks in particular filled the western part, again featuring the

parallel longitudinal grooves. Feature 85 is, according to the preliminary assessment of the pottery from its undisturbed lower fillings, contemporary with Feature 83 (and Feature 15), with material from the abandonment phase datable to the mid-18th Dynasty.

The large cellars and magazines at sector SAV1 East illustrate that, as is a common feature of the so-called temple towns, domestic space is quite limited, but much room is occupied by storage facilities, magazines and cellars (see Adenstedt 2016, 54, fig. 16). Located close to Temple A, the two new cellars (Feature 83 and 85) discovered below the schist floors of large rectangular magazines further support the functional interpretation of SAV1 East (Budka 2017a, 73-75). 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 a planned Egyptian temple town. Parallels, presumably of a later date, can be found in the temple town of Sesebi (Blackman 1937, 149-150; Fairman 1938, 152) and at Qubban (Emery and 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 and Carloti 2011-2012, 39-46; see Budka 2015b).

The main building levels of SAV1 East

Thanks to stratigraphic sequences, especially from Feature 15, several phases of use can be reconstructed for Building A and SAV1 East (Budka 2015b, 45). It is particularly significant that Feature 15 was integrated in Building A in a later phase – the cellar obviously already existed in an earlier phase and was well in use during the time of Hatshepsut. It is tempting to associate this early use of Feature 15 with the early strata in SAV1 East and around Temple A comprising storage facilities from the beginning of the 18th Dynasty. 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 18th Dynasty. The later phases of use at SAV1 East mainly comprise the mid and late 18th Dynasty – corresponding to the periods of building activity at Temple A and in the southern sector. Building A and the integration of Feature 15 into its courtyard as well as the large magazines and cellars Features 83 and 85 can be associated with the reign of Thutmose III.

Western sector (SAV1 West)

Searching for the town enclosure, its date, structure and stratigraphic position, a new site, SAV1 West was

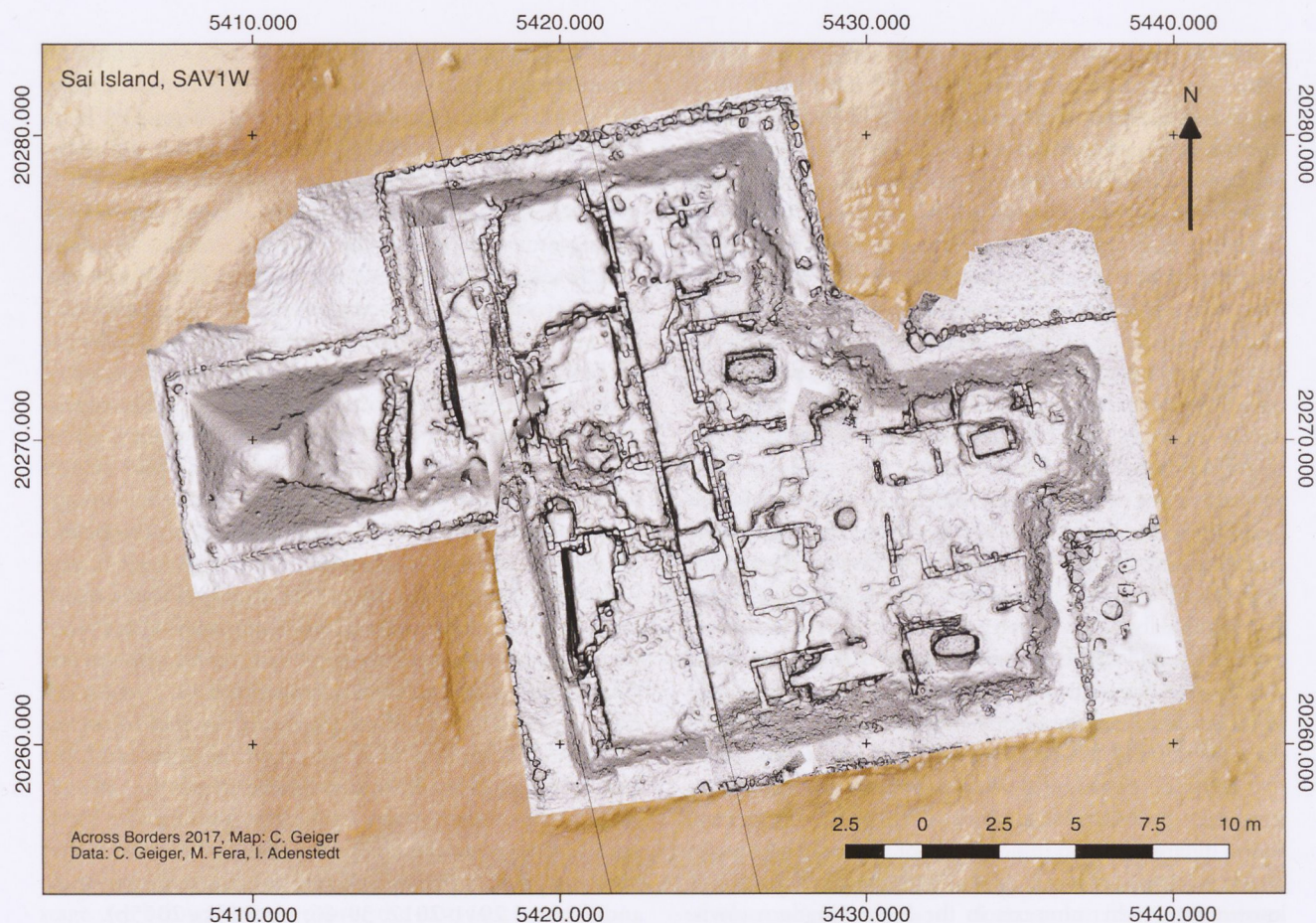


Figure 6. Sector SAV1 West, status of 2017.

opened in line with the western town gate in 2014 (Budka 2014, 63-65). Two trenches were laid out, Square 1 (10 x 10m) and Square 2 (5 x 15m). A western (Square 1W, 5 x 10m) and north-western extension (Square 1NW, 2 x 5m) had to be added to Square 1 because of the discovery of brick work at the edge of the trench (Budka 2014). In 2015, a new southern extension to Square 1 was opened – Square 1S (10 x 10m). This Square was extended towards the southeast in 2016 with Square 1SE (6 x 10m). Finally, in 2017 a small eastern extension (3 x 5m) labelled as Square 1SE_E was added to Square 1SE (fig. 6). Both the New Kingdom town enclosure and the contemporaneous remains on the inner side of this wall were investigated in the four seasons of work at SAV1 West (fig. 6). Despite much ancient destruction and disturbance, the complete thickness of the town wall (Feature 100) is visible (4.3-4.5m) – its alignment follows exactly the plan as assumed by previous surveying of French colleagues (see Azim 1975, 94, pl. 2, 120-122; also Adenstedt in this volume).

In the eastern half of both Squares 1 and 1S, *in situ* New Kingdom structures were exposed. The gap between the various north-south walls and the enclosure wall

nicely corresponds to a suitable width for a “wall street” running along the enclosure wall. Such a small lane was already noted by Azim (1975, pl. 6) in the southern part and by Doyen (2014, 368, fig. 1) in the northern part. Several floor levels and ashy layers attest to a multi-period use of the small buildings in the eastern part of SAV1 West. According to the pottery, these date to the mid-18th Dynasty, staying in use until the late 18th Dynasty and possibly also until the early Ramesside period. The modest walls of half-brick thickness include open courtyard areas, enclosed small cellars and other installations, such as a quern emplacement.

In 2017, a building phase prior to the town wall was confirmed at SAV1 West: midden deposits below the “wall street” as well as scarce traces of simple mudbrick structures comparable to finds in SAV1 North are clearly 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 (Budka 2017a, 73).

All in all, the remains of the 18th Dynasty structures along the enclosure wall in SAV1 West are very similar

to findings in SAV1 North (Budka and Doyen 2013, 171-177). Both areas within 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.

To the west of the newly exposed section of the western town wall, a ditch was observed similar to findings at the main city gate by Azim (1975, 121-122). A sequence of augering transects, conducted in 2016 by Sayantani Neogi and Sean Taylor, confirmed a sand filled depression of at least 3.4m in depth. It is likely that the alluvium extracted to create this ditch was used as source of raw material for the mudbricks of the town (see Adenstedt in this volume). At present, it remains unclear whether this deep ditch in front of the western enclosure of Sai also had a defensive character (cf. Morris 2005, 98, for the otherwise non-defensive aspects of newly built New Kingdom temple towns in Nubia). Irrespective of this, the diverse environmental conditions of the two sites SAV1 West and SAV1 East, the latter being situated above the sandstone cliff, the former on top of an alluvial deposit, are very obvious.

Summary of fieldwork in the New Kingdom town

The Egyptian temple town of Sai can now be safely reconstructed as taking up a width of c. 120m, 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 differences 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. A dissonance of houses from “standard types” was also recorded at the neighbouring site of Amara West and was in general probably actually common in Egyptian towns (Spencer 2014, 201-202). Sectors SAV1 North and SAV1 West of Sai particularly exemplify short-term buildings and complicated processes within one complex 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 18th 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 centre of Upper Nubia (Kush) during the Thutmose Period and the predecessor of Soleb and Amara West

(Minault-Gout and Thill 2012, 415, fn. 27; Budka 2013, 78-87; 2014, 57; 2015a, 74-81). Sector SAV1 East seems to markedly illustrate 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 Thutmose 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 (Budka 2017a, 80). 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 alterations from standard plans of buildings.

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 18th Dynasty – the region was centrally administered, and supplies were brought from Egypt (Budka 2016; 2017e). Besides the importance of seizing Sai, which was the northern stronghold of the Kerma 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, SAC5 (see Budka Tomb 26 in this volume). The following three main phases are proposed for the development of the town (see Budka 2015b; 2017a, 79-80):

Phase A. In the early 18th 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 Nebpehtyra, Amenhotep I and Thutmose I. This is supported 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 if an enclosure of this early phase existed, it probably had different dimensions like the one established in Phase B.

Phase B. The 240 x 120m 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 turned into an important administrative centre with an Amun-Re temple, a governor's residence (SAF2) 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 19th Dynasty. The island was still used by high officials including one of the deputies of Kush as burial place. 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, especially concerning regional contacts between the Egyptian sites.

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. For example, Phase B mirrors – on the meso level – the installation of a permanent Egyptian administration for the region of Kush. At all major sites, Egyptian architecture and material culture testify to the presence of Egyptians during this period and

to the appropriation of Egyptian style though indigenous elements, resulting in a complex material entanglement of cultures and a lifestyle that is very similar, but not completely identical to sites in Egypt proper (Budka 2017f).

Processing the data from the excavations of the Across-Borders project is still ongoing and will hopefully allow reconstructing additional aspects of the urban landscape of Kush in the near future. Much potential particularly lies in the contents of the large cellars of SAV1 East, Feature 15, Features 83 and 85, since they represent undisturbed contexts from the 18th Dynasty.

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