

The Urban Landscape of Upper Nubia (Northern Sudan) in the Second Millennium BC

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Abstract

The region of Northern Sudan referred to as Upper Nubia (Kush) is rich in archaeological remains and monuments datable to the 2nd millennium BC. These Upper Nubian monuments are mostly stone temples of the Egyptian New Kingdom, originally integrated into settlements and fortified towns that are not fully explored at present. Little is known about the domestic architecture, structure, social stratification and material culture of Pharaonic settlements in Nubia from this period.

As one of the most important New Kingdom settlement sites in Upper Nubia, Sai Island has been the focus of the European Research Council project AcrossBorders since 2012. Based on the fresh data from AcrossBorders' ongoing excavations, this paper presents the current state of knowledge regarding the evolution of the Pharaonic town on Sai Island and its role in the urban landscape of New Kingdom Kush. The question of whether Upper Nubian sites contribute to our understanding of Egyptian urbanism in general will also be addressed.

1. Introduction

The area between the Second and the Third Nile Cataract, Upper Nubia (Kush), is rich in archaeological remains and monuments datable to the New Kingdom (c. 1550–1077 BC), testifying to intense Egyptian involvement in Nubia during this period (Zibelius-Chen 2013: 135–155). The still-standing remains are primarily stone temples, which used to be part of fortresses and fortified towns built in mud brick and therefore often now vanished or unexplored. Within their former context of settlement sites, these temples allow tracing general aspects of settlement patterns along the Middle Nile. The dense cluster of Egyptian sites between the Second and Third Cataract was recently highlighted as not only a general zone of political influence and the Egyptian 're-conquest' of Kush, but also as a region along the Nile rich in gold (Klemm and Klemm 2013: 569–570). Gold and sandstone were the prime resources in the Upper Nubian area exploited by the Egyptians during the New Kingdom (Spence and Rose 2009). Thus, the Egyptian sites in the region of Kush can serve as a case study to explore relations between the environment, topographical particulars, economic aspects and the specific forms and organisation of the towns.

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2. The Nubian temple towns of the New Kingdom

As in Egypt, New Kingdom rural occupation and the smaller villages of Kush are difficult to trace (Edwards 2012: 66–74). The better-understood settlements fall into the category of temple towns, displaying common features despite a strong local individuality possibly reflective of the topographic situation. Following Kemp, temple towns are purpose built fortified towns with an enclosure wall and a prominent stone temple within the settlement area (Kemp 1972: 651–656; Morris 2005: 5). In most of the major Egyptian centres, including Soleb, only the temples have been properly investigated and the urban remains are still largely unknown. According to our present understanding, the temple towns of Kush can be considered as ‘elite residential, administrative and cult centres’ (Morkot 1995: 176). Sites like Sai consist of an enclosure wall with towers/buttresses and main gates, a stone temple for an Egyptian deity, large magazines, administrative buildings and typical Egyptian houses. An orthogonal layout is often traceable for these features and reflects urban planning.

3. Current state of research

The general pattern of Egyptian organisation/administration in Northern Sudan is quite well understood and most studies have focused on economic and strategic aspects. However, the specific microhistories of the major sites are still unclear and aspects like the character and density of occupation remain open questions (Budka 2015c: 41). There is also no common understanding regarding the social interconnections and power hierarchies of Egyptians and Nubians in the temple towns. Entanglement and appropriation are thought to be highly relevant phenomena, and most scholars today believe in a significant impact by indigenous elements (van Pelt 2013: 523–550; Spencer 2014: 42–61).

The projects most important for New Kingdom settlement archaeology in Upper Nubia are the missions currently working at Amara West (Spencer 2014), Sai (Doyen 2009, 2014; Budka 2011, 2015a, 2015b, 2015c) and Sesebi (Spence and Rose 2009; Spence *et al.* 2011). The environmental settings of these sites are being explored (e.g. Spencer *et al.* 2012) and various aspects of archaeometry conducted. Geoarchaeological and interdisciplinary applications like soil sampling, micromorphology and isotope analysis are especially common (Spencer *et al.* 2012; Budka 2015c; Spataro *et al.* 2015; Woodward *et al.* 2015).

4. The case study of Sai Island

As one of the most important New Kingdom settlement sites in Upper Nubia, Sai Island has been the focus of the European Research Council project AcrossBorders since 2012 (Fig. 1). The site can be understood as the prime example for settlement

policy of New Kingdom Egypt in Upper Nubia from the early 18th dynasty onwards. The prominence of Sai for understanding the 18th dynasty activities in Nubia is connected with the strong Kerma presence on the island. Prior to the New Kingdom, extensive Kerma cemeteries illustrate the importance of the site (Gratien 1986; Budka and Doyen 2013: 170).

The common view in Egyptology is that Sai was founded by King Ahmose Nebphtytra to act as ‘bridgehead’ (Davies 2005: 51) towards the south, and for campaigns against Kerma. AcrossBorders has opened new excavation areas within the town, adding important knowledge concerning the layout of the town, its evolution and changing character. Together with resumed work in the pyramid cemetery SAC5, fresh evidence for reconstructing the establishment of Pharaonic administration in Upper Nubia was discovered (see Budka 2015c).

4.1 Geoarchaeology and landscape: the setting of the New Kingdom town

The fortified Pharaonic town was built on the eastern bank of the large island of Sai (Fig. 1). The geology of Sai comprises several types of metamorphic Precambrian rocks and Nubian sandstone, largely covered by thin layers of comparably much younger Nile sediments (Garcea and Hildebrand 2009: 305, fig. 1; Draganits 2014: 20).

Little is known about the eastern part of the New Kingdom town, and it was usually assumed that the eastern perimeter wall had collapsed into the Nile (Geus 2004: 115, fig. 89, based on Azim 1975: 94, pl. II). Recent fieldwork and geological surveys of the sandstone cliff allowed a modification of this assessment.² From the geoarchaeological point of view, severe erosion in this part of the island is unlikely, based on the observation of the low incision rate of the Nile (Draganits 2014: 22). Additional arguments against the collapse include the existence of a broad Nile terrace east of the Pharaonic site and the presence below the town of Nubian sandstone without indications for slope failure.

The nature of the riverine alluvial platform and the sandstone cliff suggest that there was a simple landing ground, maybe sheltered by the steep cliff just east of the temple or at the north-eastern corner of the town. The latter, site 8-B-522, clearly functioned as mooring area in Christian times, as is well attested by Medieval graffiti and buoys for tying ship ropes at a very high level of the cliff (see Hafsaas-Tsakos and Tsakos 2012: 85–87).

Kite aerial photography on Sai has resulted in high-resolution orthophotos and a digital surface model created by Martin Fera (Fig. 2; Fera and Budka 2016: 20). The surface model allows for understanding the layout and setting of the town in relation to the basic landscape features like terrain, vegetation and water. This is especially

2 AcrossBorders’ geoarchaeological research was conducted by Erich Draganits in 2014 and by Sayantani Neogi in 2015.

relevant for reconstructing the exact location of the town walls, as well as for ideas about the internal structure of the site.

To test the hypothesis that the eastern town wall ran along the cliff, a $15 \times 3\text{m}$ trench was opened in the north-eastern corner of the site in 2016. Despite a high degree of erosion and Post-Pharaonic remains close to the surface, some mud brick remains of the 18th dynasty were documented. The outline of the enclosure wall was found, allowing the reconstruction of the eastern side. This discovery is highly relevant for establishing the general size of the town (Fig. 3): the fortified New Kingdom settlement measures 238m north–south and 118m east–west, for a total of 27,600m² (2.76ha) (Adenstedt 2016).

4.2 The inner structure and layout of the New Kingdom town

In order to achieve a more complete understanding of the layout of the 18th dynasty occupation, the new excavation area SAV1 East was opened in 2013, 30–50m north of Temple A at the eastern edge of the town (Fig. 3). The new squares were placed where the outline of an orthogonal building was visible on the geophysical survey map from 2011.³ The structure is aligned with Temple A and the main north-south road, thus following the orientation of the buildings in the southern part of the town (SAV1), and therefore suggesting a 18th dynasty date (Budka 2013: 80–81). Linear outlines filled with sand were revealed just below the surface, representing the negative outlines of the walls visible as anomalies on the magnetometer survey map. The Pharaonic building material, once forming these walls, had been almost completely removed during Medieval and Ottoman times. Excavations confirmed the orthogonal outline, alignment and date of a large mid-18th dynasty structure, labelled Building A (Budka 2015c: 43–45).

4.3 Building A at SAV1 East

Building A was constructed on terraces, with the lowest part in the east and much higher levels in the west. The key element of Building A is a large central courtyard ($12.4 \times 16.2\text{m}$). Although the state of preservation is very fragmentary, the outline of Building A is similar to SAF2, the governor's residence in the southern part of the town (Fig. 3; Budka 2013: 85, fig. 12). Based on ceramics from the foundation trench, Building A belongs to the major remodelling of Sai during the reign of Thutmose III, making it contemporaneous with Temple A and the structures in the southern part of the town.

One of the most important finds in SAV1 East is Feature 15, a subterranean room located in the central courtyard of Building A. Dug into the natural gravel deposit,

3 The magnetometer survey was conducted by Sophie Hay and Nicolas Crabb, British School at Rome and the University of Southampton.

Feature 15 ($5.6 \times 2.2 \times 1.2\text{m}$) represents a storage installation with a (now missing) vaulted roof. Its inner part is lined with red bricks, which also form the pavement of the structure (see Budka 2015a: 62). Based on the number of ashy deposits, large amounts of charcoal, hundreds of doum palm (*Hyphaene thebaica*) fruits and abundant animal bones with traces of burning, Feature 15 was probably used as a room for food preparation. The discovery of more than 80 almost intact vessels (plates, dishes, beakers, storage jars, *zir* vessels and pot stands) also supports a connection with food serving. Furthermore, more than 200 remains of scarab seals on clay sealings were documented, comprising a large number with royal names (Amenhotep I, Hatshepsut and Thutmose III) and various floral decorations in a style typical for the Second Intermediate Period (see Budka 2015c: 45). Thanks to a stratigraphic sequence, several phases of use can be reconstructed for Feature 15 (Budka 2015c: Table 1) which mirror the building phases of Temple A and its surroundings (Azim and Carlotti 2011–2012: 39–46).

Overall, Feature 15 contributes significantly to the understanding of the function of Building A. The large number of seal impressions, presumably used to seal boxes and chests containing diverse materials, indicate that Building A was used for the storage and distribution of products, possibly in close connection with the nearby temple. The early phase of Feature 15 might be directly related to the assumed landing place on Sai and therefore relevant for understanding the nature of the Egyptian presence in the first half of the 18th dynasty (see below).

4.4 The enclosure wall at SAV1 West

In 2014, the new site SAV1 West was opened in line with the western town gate in order to search for the town enclosure, its date, structure and stratigraphic position (Budka 2015a: 63–65). Both the New Kingdom town enclosure and the contemporaneous remains on the inner side of this wall were investigated. Despite much ancient destruction, the complete thickness of the town wall is now visible (4.3–4.5m) and in some parts, the foundation level has been reached. The alignment of the enclosure wall follows exactly the plan as assumed by previous surveying (Azim 1975: 94, pl. II, 120–122).

West of the newly exposed section of the western town wall, a ditch was observed similar to findings by Azim at the main city gate (Azim 1975: 121–122). A sequence of augering transects was conducted in 2016 by Sayantani Neogi and Sean Taylor in order to investigate the area. These transects indicate that this feature is a sand-filled depression within the alluvium of at least 3.4m in depth and is likely to be the source of raw material for the mud bricks used for the architecture of the town. The creation of the deep ditch through the extraction of this material raises a number of additional questions, since temple towns in Nubia are not known to have any defensive character (see below).

The most significant results from SAV1 West are: (1) The confirmed position of the western town wall (Fig. 3) and its Thutmoside date; (2) the lack of evidence

of early 18th dynasty activity at SAV1 West, contrasting with the excavation results from sectors SAV1 North and SAV1 East; (3) the *in situ* New Kingdom structures east of the town wall show several phases and span from the mid-18th dynasty to the early 19th dynasty.

4.5 Outer settlement structure at Sai

Fresh fieldwork by AcrossBorders underscored the role of Sai Island as administrative centre of Kush during the Thutmoside Period (Budka 2015a: 57; Budka 2015b: 74–81). From a strategic perspective, it seems that the New Kingdom town of Sai was founded at the perfect place on the island. Its location was not chosen because of the potential for adjacent cultivation and agricultural lands, but rather in order to control river traffic and to facilitate the mooring and loading of ships. The New Kingdom town's strategic position depended on topographic features that were used for the same purpose until the medieval era (Hafsaas-Tsakos and Tsakos 2012: 85–87). Besides the importance of acquiring Sai as the northern stronghold of the Kerma state empire, the Egyptians seem to have also preferred the site due to the natural resources of the area. Egypt's interest in gold and sandstone is well known, and both materials are available in the region of Sai; Nubian gold was a major economic interest for a long span of Egyptian history (Müller 2013: 74–79).

Several quarry remains between the New Kingdom town and cemetery (including chisel marks and a cut-out for a column base) illustrate that the 'white sandstone' from Sai, used for building projects further north, such as at Kumma and Semna, and attested in hieroglyphic texts (Camino 1998: 51, nr. 37, 74–75, nr. 59 and 61, 76–77, nr. 63), was actually coming from the island.⁴

To understand the outer settlement structure, possible cemeteries associated with the town also have to be taken into account. On Sai, the most important Egyptian cemetery lies approximately 800m south of the Pharaonic town. SAC5 was partly excavated by the French mission and recently published (Minault-Gout and Thill 2012). Similar to other Egyptian sites in Nubia such as Aniba, Amara West and Tombos, Pharaonic style tombs with mud-brick chapels and pyramid superstructures had been built at SAC5 (Budka 2015d).

In 2015, AcrossBorders resumed work in SAC5. A new shaft tomb with very scarce remains of a superstructure was discovered and christened Tomb 26. The rectangular shaft is aligned north–south and measures approximately 2.6×1.8 m, with a depth of more than 5.2m. The most important objects from the shaft fill are three sandstone fragments giving the name and title of the deputy of Kush Hornakht, an official active during the reign of Ramesses II. A pyramidion inscribed with Hornakht's name and title (SAC5 215) provides clear proof that the highest official of

4 For unclear reasons, Sai is not listed in a recent article about sandstone resources in Nubia (Harrell 2016).

Kush was buried somewhere in SAC5, if not in Tomb 26 itself. This evidence for the use of SAC5 by high-ranking officials of the early 19th dynasty Egyptian administration is of great importance because it is well established that Amara West was the administrative centre of Kush from the reign of Seti I until the end of the New Kingdom. Obviously, there were strong links between Sai and Amara West during this period that we still do not completely understand (Budka 2015c: 48).

5. The urban landscape of New Kingdom Kush

Based on AcrossBorders' fieldwork in both the town and the cemetery, the following three main phases can be proposed for the development of New Kingdom Sai (Budka 2015c):

- Phase A. In the early 18th dynasty, Sai was probably little more than a simple landing place and supply base for the Egyptians during the reigns of Ahmose Nebpehtyra, Amenhotep I and Thutmose I. The size and internal structure of the town at this early stage remains unclear and there is no sign of an enclosure wall.
- Phase B. The walled settlement was established during the time of Thutmose III, and became an important administrative centre with an Amun-Re temple, a governor's residence, and Building A as a substantial administrative building. The enlargement of the site goes hand in hand with increasing complexity, and varied lifestyles amongst the inhabitants suggest 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 continued importance of Sai during the 19th dynasty. The island was still used by high officials as burial place, including the deputy of 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 dependent on Egypt in the early 18th dynasty – the region was centrally administered and supplies were brought from Egypt, including ceramics (Budka 2017). Evidence for greater independence of the temple towns in Nubia only appeared during the reigns of Hatshepsut and Thutmose III, as reflected by the new system of administration, introducing the deputy of Kush.

This new phasing for the evolution of Sai allows us to associate the city walls and temples in New Kingdom sites in Nubia primarily with the representation of 'symbolic authority' (Emberling *et al.* 2015: 306–307). Other than being real strategic and military features, the demonstration of authority by the mayor, the deputy, but first of all of the Egyptian state, was of prime importance. The temple towns flourished and dominated the landscape of Upper Nubia only after the defeat of the Kerma kingdom. At Sai, the aspect of the Egyptian architecture to symbolise

Pharaonic authority was perhaps further enhanced by the ditch in front of the western town wall.

6. Discussion: New input for Egyptian urbanism?

Whether Upper Nubian sites contribute to our understanding of Egyptian urbanism and cities in New Kingdom Egypt in general shall be discussed briefly. A new study by Snape includes a checklist for the ‘citiness’ of Egyptian sites and is in this respect relevant – with the presence of elite officials, participation in trade/exchange/harbours, concentrations of crafts, and administrative functions over a territory larger than the city itself, Sai fulfils most of his city criteria (Snape 2014: 22). Furthermore, a recent update by Moeller about settlement archaeology in Egypt is also noteworthy, in that the results from Sai tie in nicely with the general new stage of Egyptian settlement archaeology, thanks to a broad set of multiple data (Moeller 2016: 38–41).⁵ All in all, despite the common comparative approach to studying urbanism in ancient Egypt (Trigger 2003; Pedersén *et al.* 2010 with further literature), a site-specific approach seems necessary to reconstruct the urban landscape during the New Kingdom.

The case study of Sai Island illustrates that much information for the evolution of a Pharaonic town can be achieved through combining diverse analytical methods and extended fieldwork. The reconstructed occupation phases and the evidence from Sai are relevant in a broader context and will help us understand the process of ‘colonizing’ Nubia during the 18th dynasty. The changing relevance of raw materials, trade routes and general administrative patterns strongly illustrates the high potential of a bottom-up approach for urban patterns. Finally, the solid economic interest based on sandstone and gold, which was relevant for the foundation and distribution of New Kingdom towns in Nubia, is of historical importance to understand Egyptian settlement policy in the 2nd millennium BC.

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⁵ Moeller only tackles the time from the Predynastic period to the end of the Middle Kingdom; especially relevant is her summary of the history of research and status of settlement archaeology in Egypt, see Moeller 2016, 31–41.

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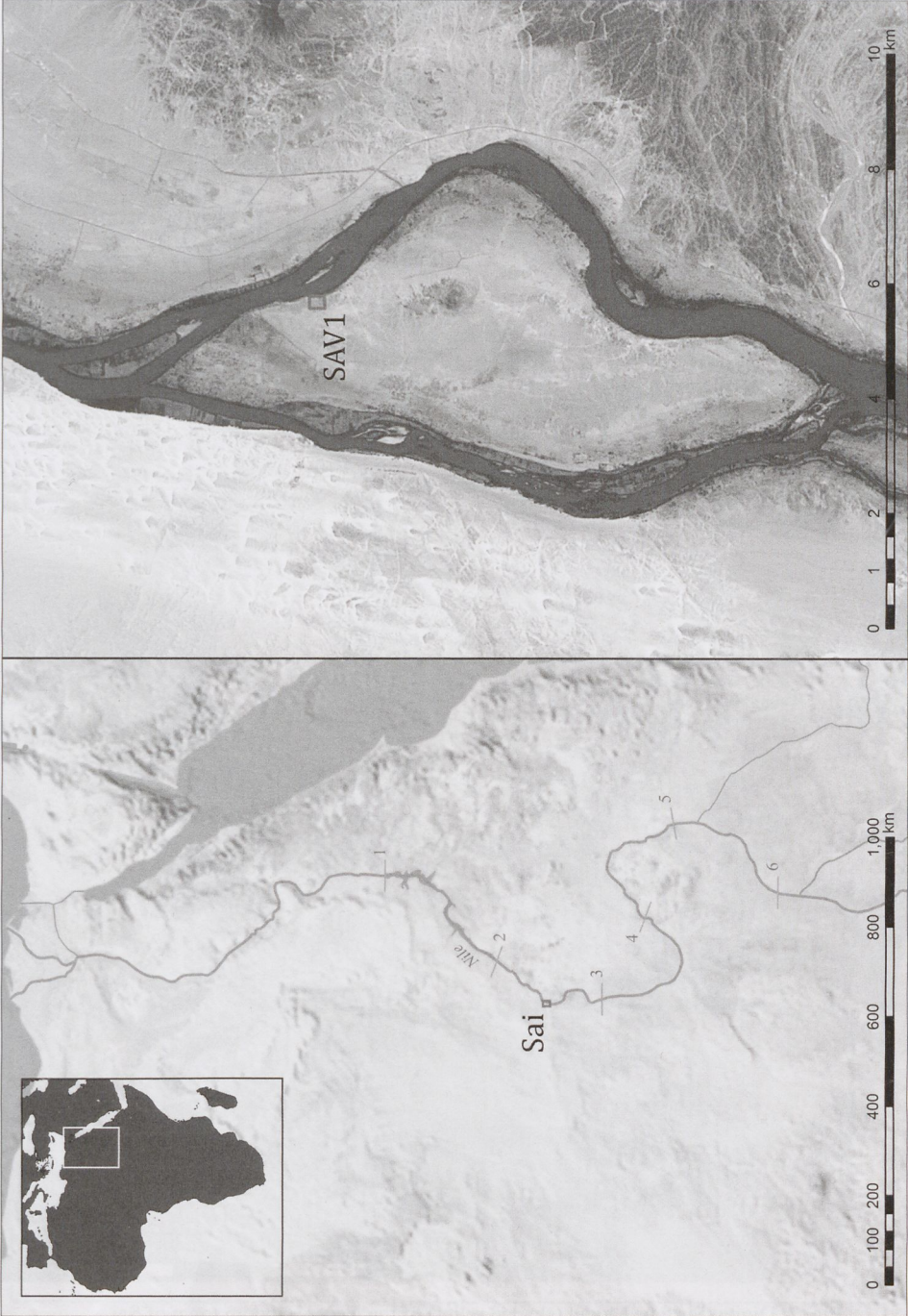


Fig. 1 Country map of Sudan in Africa, with location of Sai Island

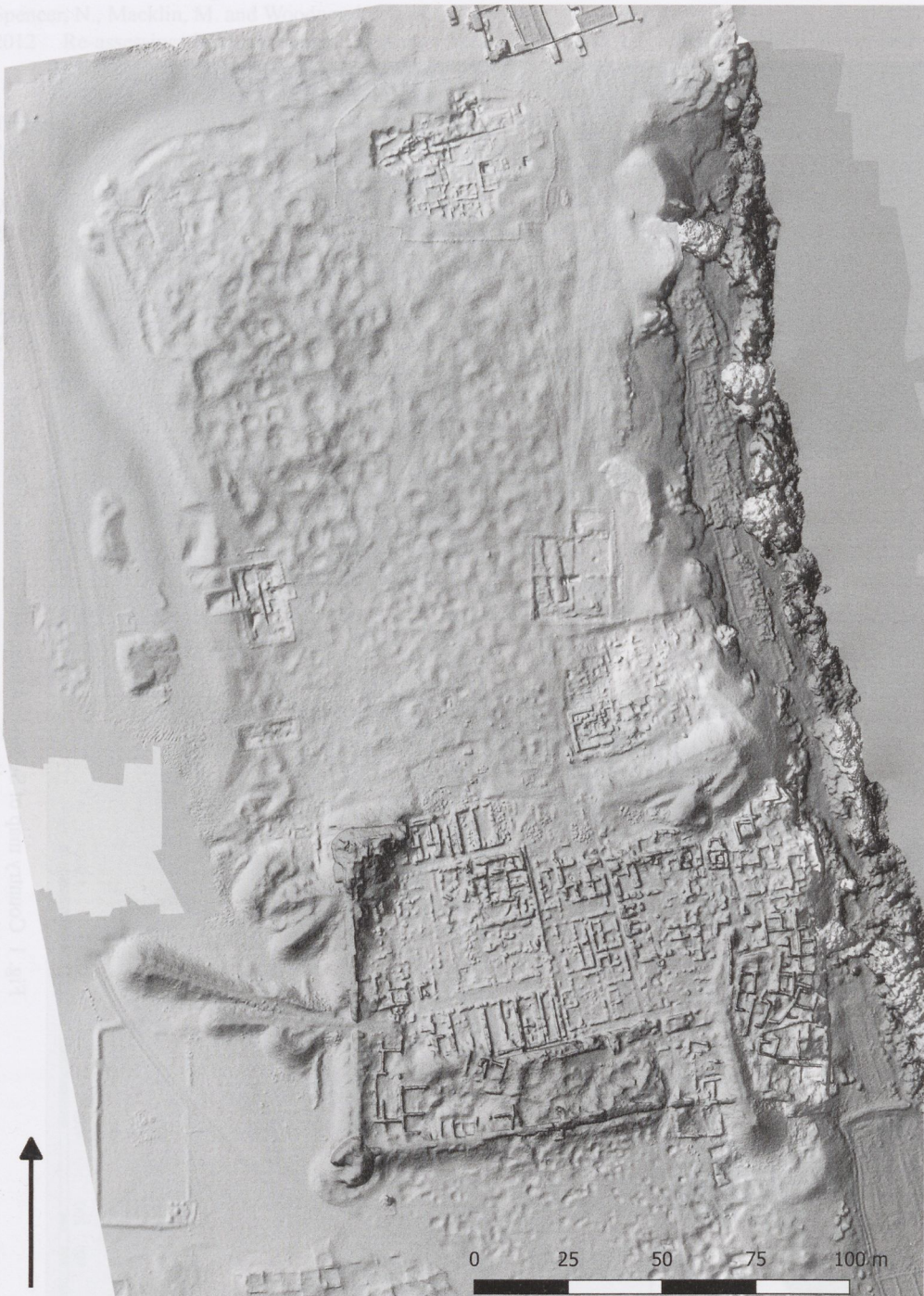


Fig. 2 Digital Surface Model (shaded relief) of the New Kingdom town of Sai
(©AcrossBorders, Martin Fera 2016)

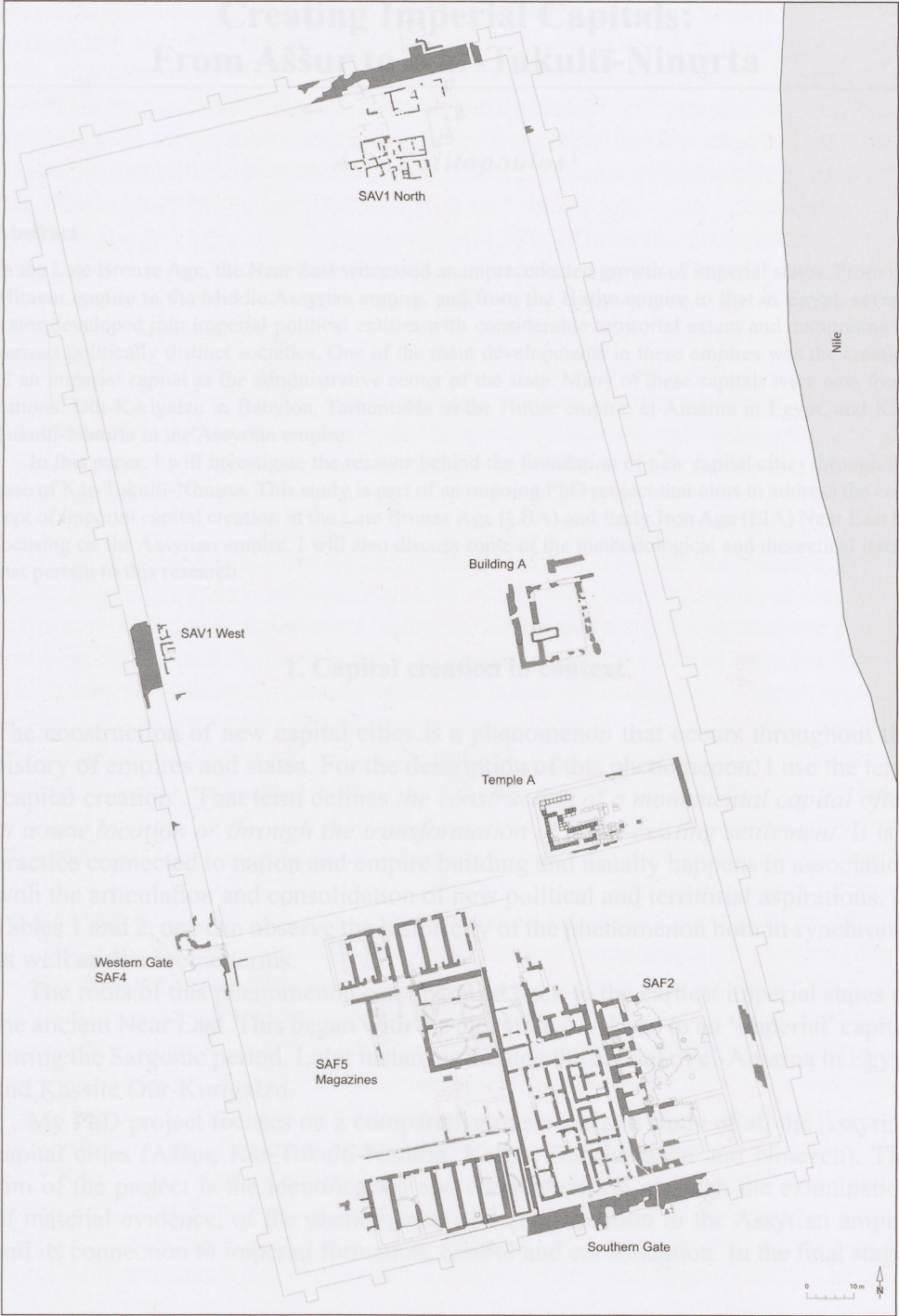


Fig. 3 Map of the New Kingdom town of Sai with reconstructed town walls
(©AcrossBorders, Ingrid Adenstedt 2016)