# Wad Ben Naga Report V: The Palace of Amanishakhete

Vlastimil Vrtal





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National Museum Prague 2024 Front: Queen Amanishakhete offering a beaded necklace; sandstone panelling relief from the Palace of Amanishakhete, fragments SNM 62/10/90d, SNM 62/10/130.

Back: Remains of the Palace of Amanishakhete shortly after its excavation (*left*; © Estate Georg Gerster, Switzerland, www.GeorgeGerster.com) and in 2021 (*right*).

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The present volume is dedicated to the people of Sudan affected by the current frightful conflict in the country.



#### **1 INTRODUCTION**

The so-called Palace of Amanishakhete (structure WBN 100) at the archaeological site of Wad Ben Naga, in the present-day Republic of Sudan, is the best-preserved palatial structure of the Meroitic kingdom unearthed up to date. With its dimensions of more than 3700 sq. m, it also ranks among the largest examples of palatial architecture of ancient Nubia. The remains of the palace thus represent an important source of data with the potential of casting light on many aspects of Meroitic architecture, administration, economy, society, and material culture.

The palace was built presumably around the Turn of the Eras (second half of the 1st cent. BCE – first half of the 1<sup>st</sup> cent. CE)<sup>1</sup> at the site of Wad Ben Naga in the present-day River Nile State, Sudan. At that time, Wad Ben Naga was the southernmost large settlement (often termed "royal city" in literature)<sup>2</sup> on the banks of the River Nile. Considerable population probably existed at Wad Ben Naga already at latest in the 3rd century BCE, provided that the identification of the site with the toponym *irbikrwb*<sup>3</sup> and Arabam (mentioned by Bion of Soloi)4 is correct. While monumental structures recently unearthed in the western part of the site can be dated to an earlier period based on archaeological finds,<sup>5</sup> the Palace of Amanishakhete and the so-called Eastern Temple (WBN 500) provided the so far earliest epigraphic evidence for the site, through the finds of objects bearing the name of Queen Amanishakhete/ Amanishakheto.<sup>6</sup> The heyday of the building activity at

the site falls to the reigns of King Natakamani and *kandake* Amanitore, who built several temples at the site a few decades later. Even then, however, the palace likely maintained its importance at the site through the effects that its monumental size and orientation of its entranceways had on local topography, if not directly through retaining its original functions. Still later, the palace went through a process of gradual decay and became host of various secondary activities and subject to transformations.

#### 1.1 The history of research

#### 1.1.1 Early accounts

The remains of the palace were for the first time recorded by Louis M. A. Linant de Bellefonds on 30 November 1821.<sup>7</sup> During another visit to the site on 13 January the following year, he produced a fine sketch capturing the western part of the site, which included in the background also part of the *kom* covering the remains of the palace.<sup>8</sup>

In 1821, specifically on 17 May,9 Frédéric Cailliaud also passed through the site, only to return - similarly to Linant de Bellefonds - shortly after the visit of the latter, in March of the following year. In his report on the second visit to the site,<sup>10</sup> Cailliaud mentioned several koms with fragments of architectural elements. Among these was also the *kom* with the remains of the palace, which he labelled kom B. Based on the elements of architecture, he considered the *kom* to cover the remains of a temple. With his colleague and companion Pierre Constant Letorzec, they created a relatively detailed plan of the site with the area of the kom clearly indicated (fig. 1.1, left). Another, considerably less precise plan capturing the kom was put together by George Alexander Hoskins over a decade after Cailliaud's visit, in 1833 (fig. 1.1, right).<sup>11</sup> In the course of the 19th century, Wad Ben Naga was visited by a number of travellers interested in ancient

<sup>1</sup> Vercoutter 1962. For the discussion see chapter 7.2.1.

<sup>2</sup> See inter alia Kröper et al. 2011; Maillot 2015a.

<sup>3</sup> Var. irbiklb; Hintze, F. 1962a: 25; Hintze, F. et al. 1993: 79, 86.

<sup>4</sup> Possibly an accusative; Priese 1984a; FHN II: 554.

<sup>5</sup> Preliminary Report 10; Preliminary Report 11; Wad Ben Naga Report I: 23; Honzl – Vrtal 2024.

<sup>6</sup> Vercoutter 1962: 282-283, fig. 12; REM 1055; Preliminary Report 10; Wad Ben Naga Report II: 47, figs. 4.23, 4.25a-b. Both variants of the name of the queen are attested, at least in the Meroitic hieroglyphic script: The variant Amanishakheto is attested in both cursive script and hieroglyphs on blocks from Qasr Ibrim (REM 1141), on the so-called "Obelisk of Meroe" (REM 0047, 1041, 1254), on the pylon in front of her offering chapel at Begrawiya (REM 0056), on a stela from the Eastern Temple at Wad Ben Naga (Preliminary Report 10; Wad Ben Naga Report II: 47, figs. 4.23, 4.25a-b), and on Stela I from Naga (REM 1294). The variant Amanishakhete is attested in Meroitic hieroglyphs on blocks from Temple T at Kawa (REM 0705), on a plaster from temple M 250 at Meroe (REM 1346), on Stela II from Naga (REM 1293), and on two fragments of stucco relief decoration from the Palace of Amanishakhete at Wad Ben Naga (Vercoutter 1962: fig. 12; see chapter 4.1.2, figs. 4.5, 4.10, SNM 11970, SNM 62/10/128a). With respect to the employment of the variant Amanishakhete on the two fragments from the palace at Wad Ben Naga, this variant is preferred in the present volume.

<sup>7</sup> Linant de Bellefonds MSS 264, 2, fol. 44; Rondot et al. 2021: 290.

<sup>8</sup> Wad Ben Naga Report I: pls. 2–3, very left; Rondot et al. 2021: ill. 181, very left.

<sup>9</sup> Cailliaud 1826: II, 184.

<sup>10</sup> Cailliaud 1823: I, pl. IX; Cailliaud 1826: III, 101.

<sup>11</sup> Hoskins 1835: 114; Hoskins MSS 2.69, Griffith Institute, University of Oxford.

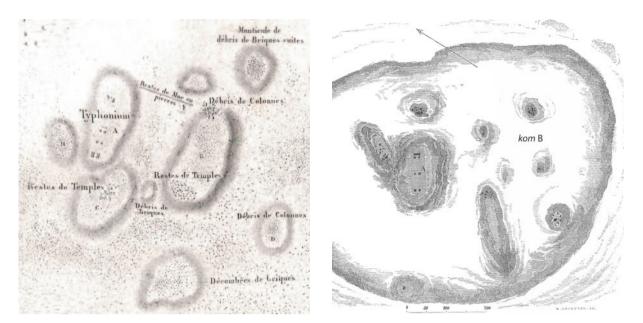


Fig. 1.1 Plan of the site of Wad Ben Naga published by Cailliaud in 1823 (*left*), showing kom B covering the remains of the Palace of Amanishakhete [Cailliaud 1823: I, pl. IX], and the same area on the plan of the site by Hoskins (*right*) with the approximate position of *kom* B [after Hoskins 1835: 114].

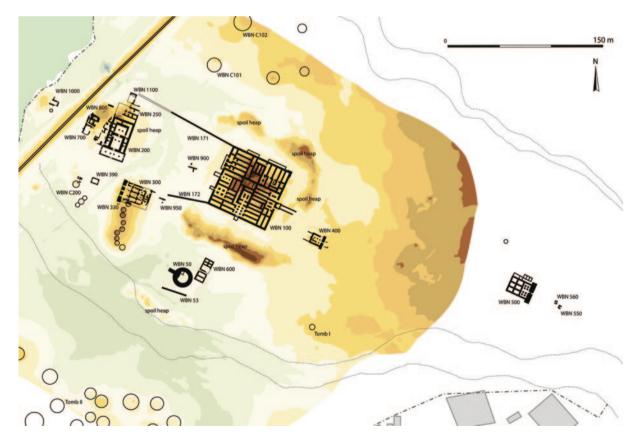


Fig. 1.2 The site of Wad Ben Naga in the present state of research with the Palace of Amanishakhete (WBN 100) in the centre.

monuments, yet besides Linant, Cailliaud, and Hoskins, none of them paid attention to the seemingly less preserved structures in the eastern part of the site, having focused mostly on the description of the so-called Typhonium (WBN 200).<sup>12</sup> Surprisingly, this was also the case of the members of the Royal Prussian Expedition who excavated in the western part of the site for a single day in March 1844,<sup>13</sup> besides several additional visits by various members of the team.<sup>14</sup>

#### 1.1.2 Archaeological research on kom B

Proper archaeological attention was paid to the remains of the palace for the first time by Thabit Hassan Thabit, the head of the expedition of the Sudan Antiquities Service which conducted excavations at the site between 1958 and 1960. In the winter of 1958/1959, the expedition carried out survey in the area of Cailliaud's kom B.15 The following season of 1959/1960 was dedicated nearly exclusively to the unearthing of the palace. During a short period of time, more than 60 rooms were cleared, with some walls still standing up to the height of 5 m. The palace turned out to be surprisingly well-preserved. It was therefore no surprise that a large number of artefacts and ecofacts were retrieved from the debris, some of which were accessioned in the Sudan National Museum and in much lesser extent - in the study collection of the Institute de Papyrologie et d'Egyptologie de Lille.<sup>16</sup> The results of the Sudanese excavations were partially published in a preliminary report by Jean Vercoutter in 1962.<sup>17</sup> The head of the expedition, Thabit Hassan Thabit, was at that time fully occupied by the starting UNESCO campaign in Lower Nubia.<sup>18</sup> Vercoutter, who incited the excavations at Wad Ben Naga,<sup>19</sup> clearly visited the site at least on one occasion during the second season of the excavations.<sup>20</sup> He also created the first published plan of the uncovered remains of the palace. The latter was partly based on an aerial photo, however.<sup>21</sup>

On numerous occasions between 1960 and 2000, the site of Wad Ben Naga was visited and surveyed by Friedrich

15 Vercoutter 1962: 275-276.

17 Vercoutter 1962.

W. Hinkel who captured the site on several series of photographs and created detailed plans of some of the structures unearthed by the Sudanese expedition, and of the site as a whole. Two distinct plans of the Palace of Amanishakhete were included among his drawings, based, at least in one case, on his survey carried out in 1977.<sup>22</sup> It contained detailed measurements and valuable observations of various architectural details.

At latest in 1980s, the palace was surveyed by Ahmed M. Ali Hakem and its plan was also created.<sup>23</sup>

In 1992 the remains of the palace were surveyed by Patrice Lenoble.<sup>24</sup>

Since 2009, the Archaeological Expedition to Wad Ben Naga of the National Museum of the Czech Republic, headed by Pavel Onderka, has carried out excavations at the site. The archaeological works in the palace have taken place concurrently with the necessary gradual conservation of the already very decayed ruins. In 2009, a survey of stone architectural elements and collecting of pottery samples were carried out in the area of the palace. Between 2010 and 2019, excavations, reexcavations, and conservation works took place in the areas of the southern and western entrances, in the centre and in the eastern part of the structure, and at several spots in its exterior. The results of these works were published in the expedition's preliminary reports.<sup>25</sup>

#### 1.1.3 Previous studies on the Palace of Amanishakhete

As an archaeological structure with considerable impact on the understanding of Meroitic architecture, culture, economy, and history, the Palace of Amanishakhete has been discussed briefly in numerous publications on the general history of Nubia.<sup>26</sup> Vercoutter's preliminary report remained apparently the main source of information for all of these works.

Some photographs capturing the palace during the 1958– 1960 excavations or taken shortly after were included in

<sup>12</sup> See *inter alia* Onderka 2015; Onderka – Vrtal 2018.

<sup>13</sup> LDT V: 335-339.

<sup>14</sup> See Wad Ben Naga Report IV.

<sup>16</sup> Geus 1975.

<sup>18</sup> Vercoutter 1962: 263.

<sup>19</sup> Vercoutter 1962: 263. See also University of Calgary Archives and Special Collections, 2001.031 02.22, letter from Jean Vercoutter to Peter L. Shinnie, 2 September 1958.

<sup>20</sup> See Vercoutter 1962: 277, fig. 8.

<sup>21</sup> Vercoutter 1962: 278, fig. 8.

<sup>22</sup> Hinkel – Sievertsen 2002: pl. IX.75; see also Hinkel Archive (Deutsches Archäologisches Institut), D-DAI-Z-Arch-FWH-Z1225–1232, D-DAI-Z-Arch-FWH-Z1250, D-DAI-Z-Arch-FWH-Z3408.

<sup>23</sup> Ali Hakem 1988: 92, fig. 10.

<sup>24</sup> Sackho-Autissier 2011: 359–361.

<sup>25</sup> Preliminary Report 1; Preliminary Report 2; Preliminary Report 3; Preliminary Report 5; Preliminary Report 7; Preliminary Report 9; Preliminary Report 10; Preliminary Report 11; Preliminary Report 12; Preliminary Report 15; Preliminary Report 16; Preliminary Report 17.

<sup>26</sup> Inter alia Adams 1984; Edwards 1996a; Welsby 1996; Török 1997b; Török 2002; Edwards 2004; Cabon et al. 2017; Wolf 2019.

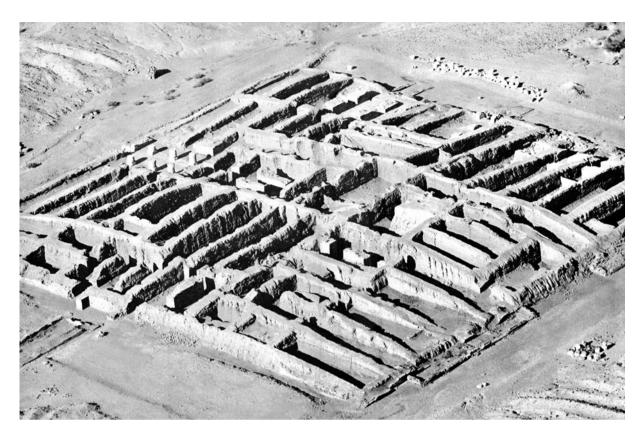


Fig. 1.3 The Palace of Amanishakhete on an aerial photograph published by Georg Gerster in 1964, four years after the termination of the first excavations [© Estate Georg Gerster, Switzerland, www.GeorgGerster.com].

a couple of publications on ancient Nubia.<sup>27</sup> These photographs are invaluable in that respect that they show the ruins of the palace in the state of preservation at the time of its unearthing or shortly after (fig. 1.3).

A description of the palace was later included in a publication on Meroitic architecture by Ali Hakem.<sup>28</sup> Besides general observations, he contributed to the discussion by publishing a new plan of the structure and some previously unpublished photographs from the Sudanese excavations. In some detail, the architecture of the palace was later discussed by Hinkel and Sievertsen in the context of their study on palace architecture at Meroe.<sup>29</sup> In 1985–1986, the site of Wad Ben Naga was visited by a team from the University of Vienna and some archaeological material from the palace was published.<sup>30</sup> Due to the discovery of the palace at Muweis (Building A), which had the ground plan analogical to that of the Palace of Amanishakhete, several comparative studies on the architecture of the two palaces were carried out.<sup>31</sup>

In 2011 and 2013, short treatises on the palace were published by the present author in his MA thesis and in an introductory publication on the site of Wad Ben Naga.<sup>32</sup> Photographic documentation from the 1958–1960 excavations was published in 2016 by Onderka.<sup>33</sup> First results of an attempt at reconstructing the 1958–1960 excavations based on collected pieces of the original field documentation were published by the present author in 2017.<sup>34</sup> Doctoral dissertation dedicated to the palace was submitted by the present author at the University of Vienna in 2021 and defended in the following year.<sup>35</sup>

35 *The Palace of Amanishakhete at Wad Ben Naga, Sudan.* DOI: 10.25365/thesis.71770.

<sup>27</sup> Gerster 1964: 94–95; Shinnie 1967: pl. 9; Adams 1977: pl. IIIb.

<sup>28</sup> Ali Hakem 1988.

<sup>29</sup> Hinkel - Sievertsen 2002: 69-71.

<sup>30</sup> Hofmann - Tomandl 1986. See also Zach 2012.

<sup>31</sup> Baud 2010b; Baud 2011; Maillot 2014.

<sup>32</sup> Vrtal 2011a; Vrtal 2013b.

<sup>33</sup> Wad Ben Naga Report I.

<sup>34</sup> Vrtal 2017.

Various objects retrieved from the Palace of Amanishakhete and accessioned in the Sudan National Museum were presented in numerous publications dealing with specific problems of Meroitic material culture. Among these, one can list objects published by Hofmann and Wenig in their studies on an unfinished statue of Sebiumeker,<sup>36</sup> by Török in his studies on imports and Hellenistic influence,<sup>37</sup> by Hofmann in her study on imported amphorae,<sup>38</sup> by Ahmed Abuelgasim Elhassan in his study on Meroitic pottery decoration,39 by Wöß on the representations of captives,<sup>40</sup> by Sackho-Autissier dealing with faience clasps<sup>41</sup> and with some pieces of relief decoration,42 by Dufková who studied two Italian imports from the palace,43 by Maillot in his study on Meroitic palaces and administrative buildings,44 by David and Evina in their paper on pottery production,<sup>45</sup> etc. Various collections of objects retrieved from the palace were also subject of specializing studies published by the present author.46

Several objects retrieved from the Palace of Amanishakhete were also presented in various exhibition catalogues.<sup>47</sup> The object entries were now and then accompanied by short treatises mentioning the palace.<sup>48</sup>

Neither a comprehensive list of finds nor most of the artefacts have been published to date, however.

#### 1.1.4 Studies on other Meroitic palaces and administrative buildings

Clearly, the evaluation of the Palace of Amanishakhete must be carried out with respect to the general context of Meroitic architecture, cultural and socio-economic history, its ideological and religious milieu, and material culture. For such considerations, studies dedicated to other Meroitic residential and administrative buildings come first to one's mind, as such structures represent the closest *comparanda* to the Palace of Amanishakhete.

- 44 Maillot 2016a.
- 45 David Evina 2016.

Defining the attributes and limits thereof for such classes of structures proves difficult, however.<sup>49</sup>

Among the primary *fontes* on structures that would fall into the same category of buildings, one can name the excavation reports and their editions on the possible palaces at the sites of *inter alia* Meroe,<sup>50</sup> Jebel Barkal,<sup>51</sup> Muweis,<sup>52</sup> el-Hassa,<sup>53</sup> Kerma,<sup>54</sup> Dokki-Gel,<sup>55</sup> Kedurma,<sup>56</sup> Faras,<sup>57</sup> Karanog,<sup>58</sup> Hamadab,<sup>59</sup> Awlib,<sup>60</sup> Musawwarat es-Sufra,<sup>61</sup> Naga,<sup>62</sup> Alim,<sup>63</sup> Jebel Khereik,<sup>64</sup> Jebel Nasb es-Sami,<sup>65</sup> or Jebel Hardan.<sup>66</sup> Besides these, also textual primary sources can be exploited.<sup>67</sup>

A number of more or less general and more or less detailed interpretative studies dealing with various problems related to these structures has appeared as well, and these studies form the second pillar supporting the state of research on which the present volume can build. Again, the list can be rather extensive, but to include a few, one can name studies of Adams, Ali Hakem, Hinkel, and Welsby on Meroitic architecture,<sup>68</sup> studies of Fitzenreiter on Kushite palaces and Nubian residential buildings,<sup>69</sup> classifications of residential buildings by Hinkel and Sievertsen,<sup>70</sup> Török's hypotheses on the ambulatory kingship and the administrative-religious landscape of the Kushite kingdoms,<sup>71</sup> studies on Kushite administration and economy by Endesfelder, Török, Vincentelli, Edwards, and Welsby,<sup>72</sup> studies on Meroitic

- 52 Baud 2008; Baud 2010b; Baud 2011; Baud 2015; Maillot 2013; Maillot 2014; Maillot 2016a; Maillot 2016b.
- 53 Rondot et al. 2022: 37-41.
- 54 Bonnet Salah ed-Din 1984.
- 55 Salah ed-Din 2004.
- 56 Edwards 1996a; Edwards 2011.
- 57 LAAA XIII; Grzymski 1982.
- 58 Woolley 1911.
- 59 Wolf, S. et al. 2011; Wolf, P. et al. 2014; Wolf, P. et al. 2015.
- 60 Mahmoud El-Tayeb Kołosowska 2005.
- 61 Wenig 2001; Eigner 2010.
- 62 Knudstad Frey 1998.
- 63 Bradley 1992: 186.
- 64 Bradley 1992: 190.
- 65 Hintze 1959b: 188.
- 66 Hintze 1959b: 187.
- 67 FHN I–III.
- 68 Adams 1984; Ali Hakem 1988; Hinkel 1996; Welsby 1996.
- 69 Fitzenreiter 1996a; Fitzenreiter 1999.
- 70 Hinkel Sievertsen 2002; Sievertsen 2002; Sievertsen 2013.

72 Endesfelder 1977; Török 1977; Török 1979a; Vincentelli 1994; Edwards 1996a; Welsby 1996; Edwards 2004; Vincentelli 2018a; Vincentelli 2018b.

<sup>36</sup> Hofmann 1972; Hofmann 1975; Wenig 1979.

<sup>37</sup> Török 1989; Török 2011.

<sup>38</sup> Hofmann 1994.

<sup>39</sup> Elhassan 2004.

<sup>40</sup> Wöß 2004.

<sup>41</sup> Sackho-Autissier 2011.

<sup>42</sup> Sackho-Autissier 2018 43 Dufková 2015

<sup>45</sup> Duikova 2013

<sup>46</sup> Vrtal 2021; Vrtal 2022; Onderka – Vrtal 2022a: 399ff; Vrtal 2023a.

<sup>47</sup> Geus 1975; Wenig 1978; Reinold *et al.* 2000; Sauquet – Villalta 2003; Welsby – Anderson 2004; Baud 2010a; Abdel-Rahman Ali Mohamed – Anderson 2013; Onderka – Vrtal *et al.* 2014.

<sup>48</sup> Hinkel 1996; Reinold et al. 2000; Baud 2010b; Vrtal 2014.

<sup>49</sup> See chapter 8.1.

<sup>50</sup> LAAA V; LAAA VI; Török 1997a; Hinkel 2001; Hinkel – Sievertsen 2002; Sievertsen 2002; Grzymski – Grzymska 2008; Sievertsen 2013.

<sup>51</sup> Donadoni 1984; Donadoni 1986; Bosticco 1989; Donadoni 1990; Kendall 1991; Donadoni 1993; Roccati 2004; Roccati 2008; Barberini 2010; Kendall 2014; Roccati 2014; Ciampini 2014–2015; Ciampini 2015– 2016; Ciampini 2018; Taurino 2018; Ciampini 2019.

<sup>71</sup> Török 1992; Török 1995.

palaces by Baud, Maillot, and Schellinger,<sup>73</sup> and the present author's previous analyses of Meroitic residential buildings and settlements.<sup>74</sup>

#### 1.2 Methodology

The present publication deals with an analysis and interpretation of a single archaeological structure in its whole complexity; taking into consideration its construction, periods of use and potential reuse, as well as its general position in the ideological and socio-economic milieu of the Meroitic kingdom.

#### 1.2.1 Sources of information

The sources of information on the Palace of Amanishakhete can be divided into several groups based on their type, reliability, and informational value. This situation stems from the fact that the archaeological structure has been almost completely excavated previously, and the present study thus represents a revision of the available archaeological and archival materials supplemented by test excavations.

The sources of information on the 1958-1960 excavations in the structure include available pieces of the original field documentation, finds accessioned in museal collections (mainly the collections of the Sudan National Museum<sup>75</sup>), archival documents such as notes and photographs, and published accounts presenting first-hand observations.<sup>76</sup> The data acquired from these sources are both primary and secondary in their nature, as some of them represent direct representation of the reality (photographic documentation, the finds), while in the case of others (reported find spots, dates of retrieval, descriptions and interpretations of archaeological contexts, etc.), the reality is blurred by the mediated nature of the observation and previous interpretations, the accuracy of which has to be tested against other evidence - if it is available - and the reliability of which has to be assigned appropriate weight.<sup>77</sup> Even the secondary pieces



Fig. 1.4 The Palace of Amanishakhete on an aerial photograph (cropped) captured by Friedrich W. Hinkel in 1999 [© Deutsches Archäologisches Institut Berlin, Archiv der Zentrale, Archiv Friedrich W. Hinkel].

of information provided by these sources are nevertheless invaluable, as they record data which either have been lost on account of the destructive nature of the archaeological fieldwork and the degradation of the remains of the structure or those that could be verified only at the expense of excessive efforts (e.g. by reexcavating the whole of the structure from post-excavational debris and fill).

The previous sources were thus supplemented also by test excavations and reexcavations in the palace by the Archaeological Expedition to Wad Ben Naga, which provided additional primary data.<sup>78</sup> The positions of test pits were determined by problem solving questions (besides the conservation efforts). In several areas, the original undisturbed stratigraphy could be detected and examined.

Archaeological data from the growing number of *comparanda* to the Palace of Amanishakhete further allowed to test the primary and secondary data from the archaeological context of the palace and view them from a wider perspective, thus enabling their proper assessment, analysis, and interpretation.

<sup>73</sup> Baud 2010b; Baud 2010d; Maillot 2015a; Maillot 2015b; Maillot 2016a; Schellinger 2017; Maillot 2018; Schellinger 2018.

<sup>74</sup> Vrtal 2011a; Vrtal 2011b.

<sup>75</sup> The present author is indebted to Abdel-Rahman Ali Mohamed, the general director emeritus, to Juweriya Osman Mohamed Zain, Ghalia Garelnabi Abdelrahman Babiker, Ikhlass Abdllatief Ahmed Idriss, and other staff of the National Corporation for Antiquities and Museums for the possibility to study the collections of the Sudan National Museum.

<sup>76</sup> Not only those of Vercoutter, but also Hinkel and possibly Ali Hakem.

<sup>77</sup> See chapter 2.

<sup>78</sup> See chapter 3.



Fig. 1.5 The remains of the Palace of Amanishakhete as seen from the northern (*top*) and southern spoil heaps (*bottom*).

#### 1.2.2 Methodology and data assessment

In chapter 2, the available field documentation from the 1958–1960 excavations is analysed, in order to obtain more pieces of information on the structure's original architecture, archaeological contexts, find spots, etc. Extensive photographic documentation, recorded not only by the archaeological mission but also a few visitors to the site, is compared with the published and archived plans of the structure, recorded objects, published reports, and the current state of preservation. Based on the data from the photographic documentation, find entries, object labels, and published reports, the progress of excavations is reconstructed, as well as find spots for a significant number of the recorded finds.

In chapter 3, archaeological report on test excavations and reexcavations by the Archaeological Expedition to Wad Ben Naga is presented. The test excavations and reexcavations comprised the survey of surface features in the structure (primary spatial context of *kom* B) and of the archaeological material redeposited in 1958–1960 around the perimeter of the structure (secondary spatial context), clearing of archaeological contexts from postexcavation fill, sampling of the archaeological material from spoil heaps, and test excavations of undisturbed strata. Stratigraphic method was employed if the nature of the contexts allowed. In chapters 4–5, analysis of recorded artefacts and ecofacts retrieved from the spatial context of the palace is carried out. The majority of the artefacts and ecofacts come from the 1958–1960 excavations and their archaeological contexts could be reconstructed only partly or the information about them was completely missing. At the same time, the artefactual evidence represents one of the richest sources of information on the palace. A specific strategy of their evaluation thus had to be adopted in order to enhance the informational value of the individual finds or groups of finds.

Throughout the analysis, it was taken into consideration that all artefacts were subjects of considerable formal and spatial transformations during their "life-history".<sup>79</sup> Only at the time of their production or entering the spatial context, the artefacts could provide us directly with the information on the activities and intentions of their original users and, potentially, also on the dating of such activities. Most of the artefacts nevertheless underwent additional pre-depositional and postdepositional transformations before entering the archaeological record. The majority of artefacts that were once present in the spatial context had in fact exited it

<sup>79</sup> Neustupný 2007: 54.



Fig. 1.6 Elevation model of the remains of the Palace of Amanishakhete in the current state of preservation; isohypses at the interval of 0.1 m.

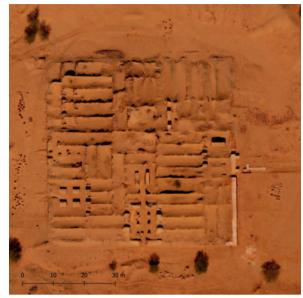


Fig. 1.7 Aerial view of the remains of the Palace of Amanishakhete in the current state of preservation [Photo: Alexander Gatzsche].

through discard, exchange, or transport. The finds that remained may have been considered refuse<sup>80</sup> or they were transformed into "dead" artefacts by the sealing of the context (e.g. by being buried under rubble). The assemblage of objects is thus not only incomplete, but also heavily biased towards objects of erstwhile low or no value. At the same time, many artefacts may have undergone transformation from the primary function to the secondary one.<sup>81</sup>

All these transformations and different chronological contexts were taken into consideration while analysing the artefacts excavated in the spatial context. The structure probably fulfilled its primary function for some time, before being eventually used for other purposes. The remains of the structure and the artefacts retrieved from its ruins thus represented a cumulative assemblage of artefacts with diverse meaning,<sup>82</sup> for a proper under-

standing of which it was – above all – important to attempt to distinguish between those artefacts that possibly represented the testimony of the primary, intended functions of the palace and those that arguably related to the use of the structure in its possible secondary functions.

In the study of pottery (chapter 5), quantification analysis was used in addition to the abovementioned analysis for comparing the individual groups of archaeological contexts, which were established based on the archaeological data. The contexts under comparison were both internal and external. Their comparison revealed possible chronological and functional implications.

The analytical chapters 2–5 represented a considerably updated collection of data on which the previous state of research on the Palace of Amanishakhete could be tested. Four subjects relating to the Palace of Amanishakhete were addressed based on these data, namely (1) the architectural form of the palace, (2) the chronological setting of the construction of the palace, its period of operation, and destruction, (3) the functions of the palace and its spatial context, and (4) the setting of the palace in the context of the site of Wad Ben Naga and the ideological and socio-economic milieu of the Meroitic kingdom. The presented subjects are discussed in chapters 6–9.

<sup>80</sup> Sommer 1990.

<sup>81</sup> Or a transformation from a single artefact to many, i.e. fragmentarisation, – consider, for example, reused potsherds.

<sup>82</sup> All artefacts, ecofacts, and their transformations were also considered from two perspectives: as reflections of events that occurred in the primary spatial context of the palace, thus providing us with the context of their creation or transformation, and as reflections of a structural system, through the understanding of which the function of an artefact and the human intentions behind it may be revealed; see Neustupný 2010: 268.

### 2 ARCHAEOLOGICAL EXPEDITION OF THE SUDAN ANTIQUITIES SERVICE, 1958–1960

In the following chapter, the primary field documentation from the 1958–1960 excavations in the Palace of Amanishakhete is presented and discussed, as well some other contemporary accounts. Attempt at reconstructing the progress of excavations and find spots of various finds is presented based on the examination of the data.

# 2.1 Archaeological documentation from the 1958–1960 excavations

#### 2.1.1 Photographic documentation

The excavations carried out by the Sudan Antiquities Service were regularly documented by the means of a camera, as evident from a large number of photographs coming from different sources. A small part of this volume was published in Vercoutter's preliminary report on the excavations.<sup>1</sup> The second and much larger collection was stored in the archives of the Section française de la direction des antiquités du Soudan (henceforth SFDAS)<sup>2</sup> and recently made available for research.<sup>3</sup>

The photographs are invaluable in that respect that they often show the original archaeological contexts, positions of various artefacts in the fill, as well as the architecture of the palace before its subsequent post-excavational destruction through erosive processes. In addition, the photographs also capture the archaeological works themselves, and thus allow to partly reconstruct their methodology. Given this informational value of the photographs, which often provided unique pieces of information, an annotated overview of all the photographs is included below.

#### 2.1.1.1 Vercoutter's preliminary report

In Vercoutter's preliminary report, a number of photographs of both archaeological contexts and artefacts discovered on *kom* B were included. These photographs can either be directly paired with photographs from the archives of the SFDAS or they clearly supplement them.<sup>4</sup> Unlike the latter, photographs provided by Vercoutter have captions or a reference in the text, and thus can be directly matched to actual artefacts or locations.

**Fig. 6:** The photograph captures object SNM 62/10/162,<sup>5</sup> i.e. the head of a statue of the god Sebiumeker. The photograph is identical to photograph SAS.102.

**Fig. 7:** The photograph captures object SNM 62/10/161, i.e. a pilaster capital (?) with the depiction of the god Apedemak. The photograph is identical to photograph SAS.080.

**Pl. XVIIIb:** An aerial view of Central Wad Ben Naga. The view captures the palace shortly after excavations. Several features are notable: (1) The picture captures regular limits of an area around the palace, which was either excavated, cleaned from surface debris, or dusted with disintegrated lime plaster during its removal. Since recent excavations in the exterior of the structure did not show other traces of previous excavation but clearing of the exterior wall, the latter two options seem most likely. Only a part of ramp WBN 161–162 seems to have been excavated. (2) By the northern exterior wall, two or possibly even three discrete ramp/podium structures are visible.

**Fig. 9:** The photograph captures two composite column capitals (type 3<sup>6</sup>) and a column drum discovered in room WBN 156. The same archaeological situation is captured on photographs SAS.074 and SAS.079. The capitals seem to rest on remains of two brick pillars in the room. As they lied on mudbrick core, while the fired brick casing around seems to be quarried away, the location of the pieces was clearly secondary.

**Fig. 10:** The photograph captures a composite column capital (type 2<sup>7</sup>) discovered in room WBN 156. The original position of (the same or another identical) capital in the debris is captured on photographs SAS.075 and SAS.076, which can thus be also attributed to the room.

Fig. 11: The photograph captures object SNM 62/10/130.

Fig. 12: The photograph captures object SNM 11970.

Fig. 13: The photograph captures object SNM 62/10/129.

<sup>1</sup> Vercoutter 1962.

<sup>2</sup> The present author would like to express his sincerest gratitude to Abdel-Rahman Ali Mohamed, the director general emeritus of the National Corporation for Antiquities and Museums, and Vincent Francigny, the director emeritus of the Section française de la direction des antiquités du Soudan, for making the photographic documentation stored in the archive of the SFDAS available for research.

<sup>3</sup> Wad Ben Naga Report I: chapter 2.5; Vrtal 2017.

<sup>4</sup> It may be even suggested that some of the photographs which were used for the report are missing in the collection from the archives of the SFDAS, despite originally having constituted its part.

<sup>5</sup> For the finds accessioned in the Sudan National Museum, see chapters 4 and 5 and Appendix.

<sup>6</sup> See chapter 6.2.6.

<sup>7</sup> See chapter 6.2.6.

**Fig. 14:** The photograph captures object SNM 62/9/101. The photograph is possibly identical to photographs SAS.103–104.

**Figs. 15–16:** The photographs capture object SNM 62/10/23.

Fig. 17: The photograph captures object SNM 62/9/107.

**Fig. 18:** The photograph captures object SNM 62/10/167.

**Fig. 19:** The photograph captures object SNM 62/9/30.

Fig. 20: The photograph captures object SNM 62/9/43.

**Fig. 21:** The photograph captures object SNM 62/9/31.

Fig. 22: The photograph captures object SNM 62/9/55b.

Fig. 24: The photograph captures object SNM 62/9/37b.

Fig. 25: The photograph captures object SNM 62/10/123.

Fig. 26: The photograph captures object SNM 62/9/25.

Fig. 27: The photograph captures object SNM 62/9/71.

Fig. 28: The photograph captures object SNM 62/10/38. The photograph is identical to photograph SAS.142.

**Fig. 29:** The photograph captures object SNM 62/10/35

Fig. 30: The photograph captures object SNM 62/10/51.

**Pl. XIXa:** The photograph captures the remains of the palace viewed from the west, spanning rooms between WBN 104 on the left and WBN 103 on the right. In the foreground, sondage 1<sup>8</sup> is visible. The photograph was likely taken from the same spot as photographs SAS.048–050 and SAS.062.

**Pl. XIXb:** The photograph captures the entrance to room WBN 142. On the left, torus moulding is visible on the façade; on the right, exterior ramp WBN 161–162 can be noted, being already in a very poor condition.

**Pl. XIXc:** The photograph captures rooms WBN 154 and WBN 155. The photograph is identical to photograph SAS.020.

**Pl. XXa:** The photograph captures a room in the south-western part of the palace; one of three rooms WBN 101–102 and WBN 159 comes into consideration, based on the position of the rail embankment and sondage 1 in the background. Two phases of construction were noted by Vercoutter in the caption without providing further arguments; these phases most likely corresponded to the use of two distinctive mudbrick types throughout the structure, changing at the floor level.<sup>9</sup> The photo may be a cropped version of photograph SAS.059.

**Pl. XXb:** The photograph captures the archaeological situation in room WBN 104 with objects SNM 62/9/68 and SNM 62/10/170. The photograph is identical to photograph SAS.125.

**Pl. XXc:** The photograph captures a room with a find of sixteen handmade blackware spherical jars with narrowing neck. The room can possibly be identified as WBN 108.<sup>10</sup> The photo is identical to photograph SAS.136.

Fig. 31: The photograph captures object SNM 62/9/39.

Fig. 32: The photograph captures object SNM 62/9/97.

**Fig. 33:** The photograph captures object SNM 62/9/98. The photograph is identical to photograph SAS.139.

# 2.1.1.2 Photographic documentation from the archives of the SFDAS

The collection includes altogether 173 photographs from both archaeological seasons of the Sudan Antiquities Service at Wad Ben Naga which relate to excavations in the Palace of Amanishakhete. The photographs were previously published by Onderka in *Wad Ben Naga Report* I; the numerical designations from the latter publication will be followed in the present volume, prefixed by SAS (Sudan Antiquities Service) for clear identification of the source.

**SAS.001:** The photograph captures the first season of excavations, which was focused largely on establishing the limits of the structure.<sup>11</sup> There are 39 workmen cleaning the exterior wall. Based on the position of shadows, an acacia tree on the very left, and a trench limit in the foreground (sondage 1), the western exterior wall is most likely the one being captured. A column drum can be seen lying on the right, next to the exterior wall. Notably, wall remains rise from the top of the *kom*. A basket is lying nearby, indicating that clearing was carried out in this area already during the first season.<sup>12</sup> Some wall remains are notable also on a prominent mound on the left.

**SAS.002:** The photograph captures a scene similar to photograph SAS.001 and taken from the same spot. Thirty-five workmen and a *rais* are captured.

**SAS.003:** The photograph likely, but not necessarily captures the first season of excavations. Either the exterior wall seems to be cleared or rooms start to be cleared from the perimeter inwards. Based on the position of the vegetation, the telegraph line and shadows, the northern side is the one depicted, close to the western corner. Thirty-six workmen are present. The formation of the northern spoil heap is captured as well. In the foreground, there appears to be a cut in the *kom*, revealing mudbrick debris (?), rather than a wall.

**SAS.004**: The photograph captures a scene similar to photograph SAS.003 and taken from the same spot. Thirty-five workmen are captured.

**SAS.005:** The photograph captures the first season of excavations; clearing of the exterior wall is captured. In the background, hills to the east of the present village are captured, which is in concordance with the position of shadows; the northern exterior wall is thus being cleared, likely in the vicinity of the north-western corner. In the foreground, the wall seems to be formed of fired bricks laid on their edges, representing the foundations of the wall. In trench T20, the northern exterior wall was indeed preserved only to this height.<sup>13</sup> The surrounding soil seems to be formed of brick debris to a considerable extent. Seventeen workmen and the *rais* are captured.

12 See the discussion on the find spot of stucco fragments (SNM 11970– 11971) from the first season; chapter 4.1.2.

<sup>8</sup> See Vercoutter 1962: 275; Vrtal 2017: 69.

<sup>9</sup> See chapter 6.2.1.

<sup>10</sup> See chapter 2.2.3.5.

<sup>11</sup> See Vercoutter 1962: 275-277; Vrtal 2017: 69.

<sup>13</sup> See chapter 3.5.

SAS.006: The photograph captures the first season of excavations; clearing of the exterior wall is captured. The vegetation and the telegraph line in the background indicate that the northern exterior wall is the one being cleared on the picture. Minimum 35 workmen and the *rais* are captured. In the foreground, the northern spoil heap is being formed, with fired brick fragments predominating. A regular pile of fired bricks from the clearing is located on the right. The clearing is carried out from both sides. On the left, the workmen are likely clearing remains of podium structure WBN 167E. On the top of the kom, remains of free-standing walls are notable. Their relatively distinct structure indicates that fired bricks are included or predominating. Below, the position of walls is marked on the surface of the kom by their darker colour, in contrast to a lighter fill (likely disintegrated lime plaster<sup>14</sup>). Rooms WBN 127 and WBN 144 are likely candidates.

**SAS.007:** The photograph captures a scene similar to photograph SAS.006 and taken from the same spot.

**SAS.008:** The photograph captures the first season of excavations; clearing of the exterior wall is captured. The scene is similar to photographs SAS.001–002. The western exterior wall is captured. Twenty-five workmen and the *rais* are captured. The sandstone block or column drum on the right is the same as on the aforementioned photos. In the centre, a trial trench cuts well into the *kom*, likely in the area of room WBN 158.

**SAS.010:** The photograph captures the second season of excavations (December 1959 or early January 1960). In the centre of the photo, clearing of room WBN 154 is underway. In the foreground, rooms WBN 110 and WBN 111 are excavated, but largely blocked from view. The surface of the *kom* is well-visible with grass growing from the soil and numerous nodules of disintegrated lime plaster. Rooms WBN 133–136 are also fully excavated and rooms WBN 138–141 behind them are being excavated. The southern spoil heap is visible on the right, the excavation house, tents, and spoil heap of the so-called Eastern Temple (WBN 500)<sup>15</sup> can be seen in the background. A column drum (?) is situated near ramp WBN 163. Twenty-four workmen and the *rais* are captured. The photograph was taken from a similar spot like photographs SAS.022–023.

**SAS.011:** The photograph captures the second season at the end of excavations. The palace is viewed from the east. Almost whole length of the eastern exterior wall is captured. In the foreground, fragments of the larger-than-life-size statue of Sebiumeker are scattered; behind, column drums are deposited in a row. To the left of the column drums, torus moulding can be noted on the façade. On the right side, remains of exterior ramp WBN 161–162 are well-visible.

**SAS.012:** The photograph captures the second season at the end of excavations. The palace is viewed from the east. Rooms WBN 139 to WBN 143 are captured. On the left, column drums are deposited in the foreground. In the centre, full length of ramp WBN 161–162 is visible.<sup>16</sup> In the entrance to WBN 128,

two circular features can be noted in the section, which can be seen in detail on photographs SAS.025–026.

**SAS.013:** The photograph captures the second season at the end of excavations. The palace is viewed from the east. Rooms WBN 141–143 are captured. Torus moulding is well-visible on the façade on the left. Nearly complete remains of exterior ramp WBN 161–162 are captured in the foreground, part of the northern wing is missing. Transition in the thickness of the walls of the ramp can be noted on both wings.

**SAS.014:** The photograph captures the second season at the end of excavations. The palace is viewed from the east. Rooms WBN 139 to WBN 141 are captured while being cleared. Eleven workmen and the *rais* are present. Torus moulding is well-visible on the right. In the foreground, there are deposited column drums and abaki/bases.

**SAS.015:** The photograph captures the second season at the end of excavations. The room depicted can be likely identified as room WBN 120, based on the direction of the shadow and similarities to photograph SAS.068. The room is captured in the much better state of preservation than during reexcavation in trench T35.<sup>17</sup> The floor is well defined and the wall between rooms WBN 119 and WBN 120 reaches the height of almost 2 m, thus precluding direct communication between the two rooms on this storey<sup>18</sup> or any other room to the west or east.<sup>19</sup> The nature of three dark spots on the eastern wall of the room is not evident from the photo: they may represent either cavities or protrusions. The white stains on the wall may represent remains of the original whitewash, but they could as well come from digging tools.

**SAS.016:** The photograph captures the second season at the end of excavations. The room depicted can be most likely identified as room WBN 117. The identification relies on the eastwest orientation indicated by the agricultural land and the telegraph line in the background, as well as the ascent of the *kom* towards the north and the orientation of the surrounding rooms to the west. The northern wall is preserved up to the height of ~3.5 m; a change of mudbrick may be indicated by slightly darker courses in the lower sections. A small ledge is visible on the western wall.

**SAS.017:** The photograph captures the second season at the end of excavations. The position of the room cannot be established based on the available data. The room is clearly of a smaller size and was divided by a light wall. The underlying surface is uneven, which may indicate that the floor was removed and the light wall served to fortify the fill under it.

**SAS.018:** The photograph captures the second season of excavations. A considerable brick debris is captured with a large spoil heap in the background, possibly the southern spoil heap of the palace. In such a case, the debris could be located by the southern limit of the *kom*.

<sup>14</sup> See the stratigraphy in trenches T22, T35, and T57; chapters 3.6, 3.8, 3.13.

<sup>15</sup> Wad Ben Naga Report II.

<sup>16</sup> See phoptograph D-DAI-Z-Arch-FWH-F-KB-sw-075-04.

<sup>17</sup> See chapter 3.8.

<sup>18</sup> See also photographs SAS.031–032. For discussion on the function of these rooms as communication see discussion in chapter 3.8.

<sup>19</sup> See also photographs SAS.067–068, D-DAI-Z-Arch-FWH-F-MF-sw-R377-12.

SAS.019: The photograph captures the second season at the end of excavations. In the foreground, foundations of ramp WBN 163 are visible, with bricks laid as inclined rowlocks. In the centre, room WBN 154 can be identified, with its sandstone door jambs and three pairs of sandstone columns. The threshold, now lost, is partly made of fired bricks. Entrances to rooms WBN 111 and WBN 157 are clearly defined on the left. In the rear, the northern wall of room WBN 156 is visible, as well as a brick laid on the floor in the north-eastern corner of the room and captured in detail on photographs SAS.038-039. The upper sections of walls of room WBN 157 are well-visible, showing no remnants of the ramp mentioned by Vercoutter.<sup>20</sup> Unlike in Hinkel's plan, only small parts of it seem to be made with fired brick casing. A pounder rests on the western column of the southernmost pair of columns. A footed (?) shallow bowl or lid is deposited on the eastern one, together with two other sherds.

**SAS.020:** The photograph captures the second season at the end of excavations. The photograph captures a scene similar to photograph SAS.019, only taken from a shorter distance.

**SAS.021:** The photograph captures the second season towards the end of excavations. In the centre, room WBN 154 can be seen, viewed from the north-east. In the foreground, part of room WBN 155 is situated. The dent in wall WBN 154/155 may have been cut for a later burial, but there is no clear evidence to support this assumption. In the background, the southern spoil heap and the remains of the so-called Circular Building (WBN 50)<sup>21</sup> can be noted. Eight workmen are captured on the photograph.

SAS.022: The photograph captures a scene similar to photograph SAS.010. In the foreground, kom with debris overlying unexcavated rooms WBN 101 and WBN 102 can be seen. Behind, two rooms WBN 110 and WBN 111 can be clearly identified. In room WBN 110 on the right, a depression in the floor can be seen, as well as debris in the north-eastern corner, both perhaps from a vessel emplacement. In room WBN 111, four or five vessel emplacements are situated by the northern wall.<sup>22</sup> The vessel emplacements are likely identical with those captured in detail on photographs SAS.150 and SAS.154. Room WBN 154 with three pairs of sandstone columns can be seen behind, followed by room WBN 155 to the left. Sandstone architectural elements (?) are deposited by the entrance to room WBN 154 and ramp WBN 163. Rooms WBN 133–136 are visible further to the east, with a vessel (?) set in the floor by the eastern wall of room WBN 135. Rooms WBN 138-141 can be seen excavated in the background. Further to the east, excavation house is situated together with several tents and rakubas. Eighteen workmen are captured.

**SAS.023:** The photograph captures a scene similar to photographs SAS.010 and SAS.022. In the foreground, room WBN 112 (and WBN 113?) are still unexcavated, showing the original surface of the *kom*, and four workmen are captured excavating room WBN 157 from the south. Behind, rooms WBN 154 and WBN 155 are fully excavated, together with room WBN 111 to the right and rooms WBN 132–136 further to the east. Works proceed in the area of rooms WBN 138–141; 20 workmen are captured in this area.

**SAS.024:** The photograph captures the second half of the second season of excavations. The entrance to room WBN 154 is captured on the left, with rooms WBN 155 and WBN 156 visible farther to the north. A sandstone column drum is deposited in the foreground, in the exterior of the palace. Rooms north of room WBN 156 seem unexcavated. On the right, rooms WBN 132–136 are fully excavated. A single sub-adult workman (?) is captured.

SAS.025: The photograph captures the second season at the end of excavations. Based on comparison with SAS.012, the feature captured on the photograph can be clearly identified as the entrance to room WBN 128. On the right, wall WBN 143/148 is rather only roughly cleared; mudbricks seem to predominate. An elongated vertical break in the wall is apparent close to the entrance, probably caused by erosion. Two bricks, possibly fired, protrude from the face of the wall; they do not seem to be *in situ*. Wall WBN 128/143 is made of mudbrick with fired brick door jamb only.<sup>23</sup> In the upper part, the door jamb recedes by ca 20 cm and continues upwards, likely in fired bricks. This step reminds strongly of a similar step in room WBN 119 that can be noted on photographs SAS.031-032. At the same height as the step, a wooden lintel seems to be laid horizontally, resting on the step in the wall and in wall WBN 143/148. On the lintel, either a wall or brick debris can be noted, with at least two rows of bricks sloping towards the north. The space representing the entrance to room WBN 128 is filled with brick debris (the lower part) and mud deposited in thin layers (the upper part). Remains of a nearly fully disintegrated wooden threshold can be noted at the floor level, corresponding to the pocket in the door jambs that was to accomodate it. At about a half of the height, a different structure in the section can represent either another piece of wood or mud layers. Two curious circular features can be clearly noted just under the lintel. It is hard to tell their nature from the photograph, but given their shape, they might represent negative imprints of wooden posts. The section remained unexcavated, as apparent from a later aerial photograph (fig. 1.3).24

**SAS.026**: The photograph captures a scene similar to photograph SAS.025. A 1 m scale was added to the section. Unlike in the case of photograph SAS.026, the fill above the lintel can be seen completely, showing five inclined rows of bricks. The nature of the fill is unclear, and it cannot be estimated whether it represented a wall blocking or (perhaps more likely) brick debris.

**SAS.027:** The photograph captures the second season at the end of excavations. The feature photographed is an irregular section of fired brick casing of a wall built predominantly of mudbricks and preserved up to ca 1.5 m. Minimum two bricks inserted into the floor (?) can be further seen below, laid as row-locks. Neither the room nor the wall can be identified, although it is highly likely, judging from the shadows, that south-eastern corner of a room is captured.

**SAS.028:** The photograph captures the second season at the end of excavations. A ca 2 m high mudbrick wall is captured with a small section of fired brick casing, starting at the height

<sup>20</sup> Vercoutter 1962: 279; see also Hinkel – Sieversten 2002: pl. X.66.

<sup>21</sup> See Wad Ben Naga Report III.

<sup>22</sup> See also photograph Shinnie exp. neg. 1423; Shinnie 1967: pl. 7.

<sup>23</sup> Cf. Hinkel – Sievertsen 2002: pl. IX.75; see chapter 3.7, fig. 3.22, WBN 129, door jamb north.

<sup>24</sup> Gerster 1964: 94–95; see also photograph D-DAI-Z-Arch-FWH-F-KBsw-075-04 dated 2 March 1960.

of ca 1 m above the floor. The wall cannot be identified, although based on the strong light, it is probably the southern face. The fired brick casing may have supported a lintel or an architectural element in a higher storey.

**SAS.029:** The photograph captures a scene similar to photograph SAS.027. The structure of the wall is more distinctive, showing that the fired brick casing continued towards the corner. A dent in the preserved wall can be seen above the casing, which might indicate the function of the casing.

**SAS.030:** The photograph captures the second season at the end of excavations. In the centre, a ca 1.2 m high baulk is captured, preserving the fill of a room. At the half of its height, several rows of bricks can be noted, roughly horizontal. These rows might represent either a secondary blocking or other alteration of the space in the room, and might be the reason for the baulk to be preserved, although it is also possible that they represent debris from brickwork above. On the right, there is corner of a mudbrick wall, with a ca 2 m long and 0.8 m wide wing protruding to form an entrance to the room captured. The door jamb likely has fired brick casing. On the left, there is a long mudbrick wall. Based on the shadows, the view is likely towards the west. Comparing the photograph to the aerial photo of the palace,<sup>25</sup> as well as Vercoutter's plan (fig. 2.3, *left*),<sup>26</sup> the most likely candidate for the room captured is room WBN 106.

SAS.031: The photograph captures the second season at the end of excavations. The room on the photograph can be identified as room WBN 119, viewed from the south. The floor of the room is well-defined in the centre. On the left, a baulk preserving the original fill of the room can be seen. The baulk was examined during excavations in trench T35.27 Behind the baulk, wall WBN 119/120 can be noted, with some 28 rows of brickwork preserved (ca 2.7 m) from the floor up. To the right, wall WBN 119/122 is preserved to the height of 30 rows of brickwork from the floor, representing ca 2.8 m. The top of the wall forms a step of 0.4 m, behind which the brickwork continues upwards. The step is very similar to the step on photographs SAS.025-026 and possibly represented a support for joists of a wooden floor. The section of the wall from the step up might be built of fired bricks. Further to the right, wall WBN 119/121 can be seen with a regular, rectangular dent. There is a possibility that the dent indicates the location of an opening, but it does not seem very likely given its height, the absence of casing, and the situation as viewed on photograph SAS.040. Behind the wall further to the east, a part of the baulk examined in trench T22<sup>28</sup> can be noted, as well as a section of fired brick (?) wall WBN 121/122.

**SAS.032:** The photograph captures a scene similar to photograph SAS.031. In the upper part, walls with fired brick casing (?) pertaining to rooms WBN 122–124 can be noted. Based on the change of material and the fact that they are built higher than the step in wall WBN 119/122, which likely represented

the second floor level, the fired brick walls possibly belonged to the upper storey of the palace. To the right, a part of the baulk in trench T22 can be seen. In the background, the *Mahatta* quarter of Wad Ben Naga village is well visible.

**SAS.033:** The photograph captures the second season at the end of excavations. In the centre, a small, ca 0.3 m deep and 1.2 m wide buttress with fired brick casing can be noted, starting ca 1 m above what might have been the floor level or underfloor fill. The surrounding wall is made of mudbricks. Another parallel wall can be seen in the background. On the right, another protrusion or a perpendicular wall can be noted. The feature captured on the photograph cannot be identified with any buttress on Vercoutter's, Ali Hakem's, and Hinkel's plans. Judging from the state of preservation of the walls, the photograph nevertheless must come from the Palace of Amanishakhete; an omission in their plans is thus most likely. Based on the shadows, the eastern or southern wall is captured.

**SAS.034:** The photograph captures the second season at the end of excavations. Judging from the comparison with photograph SAS.035, the south-western corner of room WBN 118a is captured. In the southern wall, a notable regular break in the wall is located approximately where room WBN 157 would follow. Similar break can be noted also on photographs SAS.031–032. Like the latter, it likely does not represent an opening in the wall, such as an entrance, but rather the negative of an architectural element quarried away, such as a sandstone threshold or fired brick casing, or a burial pit. Thirty courses of brickwork are preserved above the floor level. The floor seems relatively rough; two circular (?) features of unclear nature are located in the centre.

SAS.035: The photograph captures the second season at the end of excavations. In the foreground, wall WBN 118a/118b is captured. The wall has a thickness of a single brick and is laid irregularly. In the lower part, bricks were laid as inclined rowlocks in several courses, over which two to three roughly horizontal courses were laid, followed by bricks inclined in the other direction in the southern part and laid as rowlocks in the northern part, with an intermediary layer of horizontally laid bricks. The lower part of the wall may have been strengthened in this way, as inclined rows do not appear on the other side of the wall. To the right, brick debris from the surrounding walls can be noted, possibly left unexcavated similarly to the baulk in trench T57.29 In the north-western corner of room WBN 118a, a curious brick construction can be noted, which possibly continued along the whole of the northern wall originally. It cannot be ascertained whether this construction is bound with the surrounding walls. The construction may have represented some kind of a support for an unknown architectural element (similar to the step in the wall on photographs SAS.031-032). It cannot be excluded that it should be linked to light wall WBN 118a/118b. Unlike the latter it could hardly be a secondary addition to the room, however, as its foundations are clearly reaching below what is presumably the floor level in the room. On the floor, the same circular (?) feature of an unclear nature as on photograph SAS.034 is visible.

<sup>25</sup> Vercoutter 1962: pl. XVIIIb; Gerster 1964: 94-95.

<sup>26</sup> Vercoutter 1962: fig. 8.

<sup>27</sup> See chapter 3.8; Preliminary Report 12.

<sup>28</sup> See chapter 3.6; Preliminary Report 9.

<sup>29</sup> See chapter 3.13.

SAS.036: The photograph captures the second season at the end of excavations. In the foreground, room WBN 118a is captured, with one of the features on the floor visible on photograph SAS.034. The floor appears heavily disturbed as it is sloping mildly towards the south. Wall WBN 118a/118b is well visible on the photograph. In the lower part, it seems to constitute of courses of mudbricks laid on their broad sides. In the upper part, courses of bricks laid as rowlocks alternate with the courses of bricks laid as headers (and stretchers?); the bricks are laid with less care in this section of the wall and the courses are not horizontal. The wall clearly post-dates the main walls of the room and there is a strong possibility that it is in fact secondary. Along walls WBN 118a/119 and WBN 118/121, two baulks are left as a ramp for workmen. The one in room WBN 118b was examined in trench T57.30 Possible fired bricks might be noted on the top of the wall and likely also on top of walls WBN 118b/128 and WBN 118b/129 further behind. On the very right, a regular cut in wall WBN 117/118a is worth attention with respect to similar cuts on photographs SAS.031-032 and SAS.034 which might indicate indirectly the position of openings. Farther to the east, rooms WBN 128-131 can be seen, with their poorly preserved walls. Section through the entrance to room WBN 128 can be noted. In the background, remains of the so-called Small Temple (WBN 400)<sup>31</sup> are visible, as well as the excavation house.

**SAS.037:** The photograph captures the second season at the end of excavations. The room captured cannot be identified. Surrounding walls are made of mudbricks, and the room should thus be sought in the interior. Given the state of preservation, the photograph must come from the palace. The feature photographed is an irregular debris framed on two sides by perpendicular lines of brickwork (one or two courses maximum) or sandstone lintels. In the lower left corner, a layer of pebbles reminiscent of the material used as the fill elevating floors can be noted.

SAS.038: The photograph captures the second season at the end of excavations. The room cannot be identified with absolute certainty. Based on several indices, namely the height of the preserved brickwork, the break in the wall, the mutual position of walls, the location of fired brick casing, the direction of shadows, and the rows of bricks on the floor, the north-eastern corner of room WBN 156 is most likely captured on the photograph. On the very left, the eastern pillar in the room can thus be seen. Behind it, the position of fired brick casing is in concordance with present observation, as well as Hinkel's plan<sup>32</sup> and photographs SAS.019-020.33 The same photographs also capture the unusual rows of mudbricks (?) laid inclined on the floor in five columns. Notably, the columns of inclined bricks seem to continue under wall WBN 117/156. The unusual character of the wall is further strengthened by the way the bricks were bound and by its recessed mudbrick section on the right. This situation perhaps led Vercoutter to include an opening between rooms WBN 117 and WBN 156 (see fig. 2.3, *left*),<sup>34</sup> although he would have switched the eastern and western sides of the wall (the absence of the opening in the western side of the wall is demonstrated by the aerial photo of the excavated palace [fig. 1.3] and Hinkel's plans [fig. 2.3, *right*]).<sup>35</sup> The mudbrick section of the wall is, however, apparently well-bound with wall WBN 131/156, and thus it cannot represent a blocked entrance. It may be rather suggested that the section of the wall with badly bound fired brick casing marks a repair to the wall and the rows of bricks on the floor represent the repair material. This would also explain the poor state of preservation of the upper section of the wall.

**SAS.039:** The photograph captures a scene similar to photograph SAS.038.

**SAS.040:** The photograph captures the second season at the end of excavations. In the foreground, room WBN 121 is captured, with a considerable break in the wall caused by erosion in its south-eastern corner. In the lower right corner, the baulk excavated in trench T22<sup>36</sup> can be noted, with the original fill left unexcavated. Behind, over wall WBN 118b/121, another baulk can be noted, excavated in trench T57.<sup>37</sup> On the top of the wall, unclear objects are deposited, possibly fragments of sandstone blocks, rather than bricks. On the left, room WBN 127 can be clearly identified, with a pillar with fired brick casing protruding from the centre of its southern wall. Further to the east, rooms WBN 128–132 and WBN 144 can be seen. In the background, column drums deposited to the east of the palace and the excavation house are visible.

SAS.041: The photograph captures the second season of excavations. A section through the original fill of a room is captured. The room in question cannot be identified with certainty. Provided that the photograph comes from the end of excavations, the baulk in room WBN 121 examined in trench T2238 comes into consideration, particularly given the height of the section. The section shows several consecutive layers, the character of which can be estimated based on comparison with baulks examined during recent reexcavations.<sup>39</sup> The uppermost part of the section is formed by two distinct accumulation horizons of white nodules of disintegrated lime plaster. Below, a thin layer of small fragments of fired bricks and / or sandstone chips is visible, overlying a solid layer of mudbrick debris. Under the debris, another layer of disintegrated lime plaster or *sāra* is visible. This sequence of layers is in concordance with the examined baulks. In the foreground, the brick debris forms a small ramp, which may have been used by workmen during excavations.

**SAS.042:** The photograph captures the second season at the end of excavations. Similar to photographs SAS.041 and SAS.044, a cross-section through the original fill of a room is

- 38 See chapter 3.6.
- 39 See chapters 3.6, 3.8, 3.13.

<sup>30</sup> See chapter 3.13.

<sup>31</sup> See Wad Ben Naga Report II.

<sup>32</sup> Hinkel – Sievertsen 2002: pl. IX.75.

<sup>33</sup> See also photograph D-DAI-Z-Arch-FWH-F-KB-sw-188-02.

<sup>34</sup> See Vercoutter 1962: fig. 8.

<sup>35</sup> Gerster 1964: 94–95; Hinkel – Sievertsen 2002: pl. IX.75; Hinkel Archive, D-DAI-Z-Arch-FWH-Z1232.

<sup>36</sup> See chapter 3.6.

<sup>37</sup> See chapter 3.13.

captured. The room in question is almost certainly room WBN 121 and the baulk is the one examined in trench T22,<sup>40</sup> given its corresponding shape, height, and composition. Several consecutive layers are visible, namely a deep layer of disintegrated lime plaster overlying a solid layer of brick debris and another layer of disintegrated plaster or *sāra*. The small baulk on the left was probably left on account of several complete bricks in the layer, which do not seem to form a regular structure, however.

SAS.043: The photograph captures the second season of excavations. A section through an unusual construction is captured, formed by ca 0.65 m of excavated fill of the floor made of sāra (?) and ca 0.7 m of mudbrick debris, which forms a base for a regular brick construction. It is not clear whether fired bricks or mudbricks were used for the latter. The construction employs bricks laid as headers and stretchers, as well as rowlocks. In this respect, the construction is similar to light wall WBN 118a/118b as well as the exterior wall in room WBN 143;41 however, it cannot be any of these walls. The most likely candidate is a construction in room WBN 160, visible on photographs SAS.060–062.42 All these photographs unfortunately show the other, western side of this construction, and only indirect evidence is thus available; namely the identical thickness of the excavated fill of the floor and only slightly smaller thickness of the brick debris and brickwork, which cannot be distinguished on photograph SAS.060. A similar position of shadows on both photographs would also speak for the possibility. Against such an identification speaks a slightly different "skyline" of the brickwork and the height of the main wall, which seems smaller than the main wall on photograph SAS.060. The former could be explained by the construction being relatively large and the photograph having been taken from a low angle. On a later aerial photograph (fig. 1.3),43 the construction seems rather light, however.

**SAS.044:** The photograph captures the second season of excavations. A section similar to photographs SAS.041–042 is captured, although nothing indicates that it is the same section. Baulk in room WBN 121 thus comes into consideration given its height; however, it is equally possible that the photograph captures a section in another room which was later removed. A similar structure of the fill can be noted. In the uppermost part, a thick layer of accumulated disintegrated lime plaster is located, under which solid mudbrick debris from the surrounding walls overlies another, much thinner layer of disintegrated lime plaster, pebbles, and possibly *sāra*.

**SAS.045:** The photograph captures an adult burial embedded in a brick debris. Based on the volume of the brick debris, the photograph most likely comes from the palace;<sup>44</sup> the so-called Circular Building being the only possible, yet less likely alternative location. The position of the body cannot be determined; the head was to the east, the face to the north. The deceased

was wrapped in a leather shroud. No burial goods are visible. Burnt wood can be noted in the brick debris to the right of the body.

**SAS.046:** The photograph captures the second season at the end of excavations. The room captured cannot be identified. In the upper part, two perpendicular mudbrick walls can be noted; one with strengthened foundations. Three light walls constructed of loosely laid mudbricks and mudbrick fragments parallel to each other and connected by another similar wall at one end can be seen in the centre of the photo. These walls strongly remind of light walls excavated in trench T22,<sup>45</sup> in which case they served as a structural reinforcement of the fill elevating the floor. Similar function can be suggested for the walls on the photograph. Remains of the original fill with pebbles and small stones can be noted in one of the compartments.

**SAS.047:** The photograph captures a scene similar to photograph SAS.046. Another wall of the room is visible, with foundations reinforced in a similar way.

**SAS.048:** The photograph captures the second season at the end of excavations. The excavated palace is viewed from the west; a large part of the western exterior wall is visible (rooms WBN 104 to WBN 101). In room WBN 160, a light construction is visible.<sup>46</sup> The eastern wall of room WBN 158 seems to retain some of its whitewashed interior plasters. Sandstone column bases, drums, and capitals are redeposited in the foreground, together with some potsherds. In the very foreground, son-dage 1<sup>47</sup> with excavated remains of light buildings can be seen.

**SAS.049:** The photograph captures a scene similar to photograph SAS.048. A large part of the western exterior wall is visible, spanning rooms WBN 158 to WBN 101. On the right, the southern stone wall WBN 172 can be noted.

**SAS.050:** The photograph captures a scene similar to photographs SAS.048–049. A large part of the western exterior wall is visible, spanning rooms WBN 160 to WBN 101.

**SAS.051:** The photograph captures the second season at the end of excavations. Room WBN 103 and ramp WBN 164 leading to it can be seen, viewed from the west.

**SAS.052:** The photograph captures the second season in the course of excavations, likely in late December 1959, as room WBN 103 is excavated while rooms WBN 112–114 are not. Sections through the entrances to the latter rooms can be noted; the quality of the photograph does not permit to describe the character of the fill, unfortunately. Whitewashed plaster can be noted on the northern wall of room WBN 103 on the left.<sup>48</sup> Some burnt beams are visible by the north-western pillar in the room. In the foreground, ramp WBN 164 can be noted, in the debris of which at least one fragment of a column drum can be seen. A bowl (?) can be noted on the far left, on the top of the *kom*.

<sup>40</sup> See chapter 3.6.

<sup>41</sup> See photographs D-DAI-Z-Arch-FWH-F-KB-sw-075-03-04.

<sup>42</sup> For the discussion, see photograph SAS.060.

<sup>43</sup> Gerster 1964: 94-95.

<sup>44</sup> See photograph SAS.018.

<sup>45</sup> See chapter 3.6.

<sup>46</sup> See photograph SAS.060.

<sup>47</sup> See Vercoutter 1962: 275; Vrtal 2017: 69.

<sup>48</sup> See also photographs SAS.054, SAS.127, and D-DAI-Z-Arch-FWH-F-KB-sw-075-07.

**SAS.053:** The photograph captures the second season at the end of excavations. Room WBN 103 is captured, viewed from the south-east. In the foreground, four pillars with fired-brick casing are clearly visible. Burnt wooden beams can be noted in the debris by the south-western pillar; traces of burning are visible also on the south-eastern pillar, possible fragments of burnt wood are situated nearby. In the background, sandstone column bases, drums, and capitals can be seen.

**SAS.054:** The photograph captures a scene similar to photograph SAS.053. In the foreground, the entrance to room WBN 112 can be seen. In the centre, room WBN 103 is visible, with four pillars and burnt wooden beams by the north-western and south-western pillars. Plaster can be noted on some of the pillars and on the northern wall of the room.

**SAS.056:** The photograph captures a scene similar to photographs SAS.048–050. A large part of the western exterior wall is visible, spanning rooms WBN 104 to WBN 101.

**SAS.057:** The photograph captures the second season at the end of excavations. Room WBN 158 is captured, viewed towards the west. On the left, the westernmost sandstone pillar in the room can be noted. Behind, the entrance to the room with its well-preserved sandstone jambs can be seen, as well as sandstone column drums redeposited in the exterior of the building. In the foreground, several fired bricks form either a secondary light wall or represent remains of the original fired brick casing of the floor.

**SAS.058:** The photograph captures a scene similar to photograph SAS.057. In addition to the latter photo, the middle one of three sandstone pillars in the room is captured, with an unusually positioned sandstone block abutting it. It cannot be demonstrated whether the vertical block is in its original position or had fallen during the disintegration of the building. The former seems likelier given the pedestal.

**SAS.059:** The photograph captures the second season at the end of excavations. A room in the south-western part of the palace is captured; rooms WBN 101–102 or WBN 159 come into consideration given the position of the rail embankment and sondage 1 in the background.<sup>49</sup> Two phases of construction were noted by Vercoutter<sup>50</sup> without providing further explanation. The "phases" most likely corresponded to the use of two distinctive mudbrick types as evidenced throughout the structure, changing at the floor level.<sup>51</sup> The lower left corner indicates that the lower section of the wall was indeed built of mudbricks; brickwork structure can be noted also further to the west. On the floor level, bricks were destroyed either by erosion or quarried away – it can be suggested that the protruding course of bricks is built of fired bricks, possibly representing the original floor.

**SAS.060:** The photograph captures the second season at the end of excavations. Room WBN 160 is captured; viewed towards the east. On the left, room WBN 104 can be partly seen; on the right, rooms WBN 115–116 and WBN 158 are visible in

a similar way. In the eastern part of room WBN 160, a brick construction can be seen, which is visible also on some other photographs (SAS.061–062 and possibly SAS.043). The brickwork seems to start only at the height of ca 1.5 m above the limit of excavation in the room, although this may be on account of erosion or poor clearing of its structure below. The construction abuts the southern wall of the room; it does not seem bound with it, although it also cannot be excluded. Several additional important observations can be made: The exact position of the original floor level is unclear. Two hypothetical variants are possible: (1) The floor level is represented by the maximum level of excavation in the room; the overlying whitish fill with the depth of 0.65 m represents disintegrated lime plaster debris from the surrounding walls. The plaster debris was covered by mudbrick debris, also visible only under the brick construction in the room; the brick construction on top of the debris would thus necessarily be secondary; i.e. it was constructed only at the time that the surrounding walls were in an advanced state of decay. (2) The floor level was taken away during the excavations and its level is represented by the change of material under the brickwork, the marked erosion on the southern wall of the room, and the colour difference on the northern wall at approximately the same level, which might be indicative of the change of mudbrick type. In this case, the brick construction could be part of the original plan. It should also be noted that whitewashed mud plaster is well-preserved on both the southern and northern walls of the room. The plaster however starts only at a certain height, which is gradually greater towards the east. The linear nature of the lower limit of the plaster on the northern wall indicates that it might not be a coincidental phenomenon; on the contrary, it could mark a position and inclination of a communication with the upper storey, possibly in the form of a ramp or a staircase.<sup>52</sup> On the southern wall, the same linear anomaly is marked by the state of preservation of mudbricks. It is equally notable that the light brick construction terminated at the height of this anomaly. This fact can, however, indicate either that the brick construction served as a support of the assumed communication with the upper storey or that specific erosive processes were at play at a certain point in time of the decay of the structure which destroyed the upper part of the wall and eroded the surface of the southern wall. Based on the evidence discussed, it seems most likely that the linear anomalies indeed mark the position of a communication with the upper storey, although its nature and manner of construction are enigmatic. The light wall was likely secondary, as it appears to be built on debris (?).53

**SAS.061:** The photograph captures the second season at the end of excavations. A large part of the western exterior wall is captured, spanning rooms WBN 106 to WBN 160. In the foreground, sandstone column drums and blocks can be noted, redeposited in the exterior of the structure. A significant number of potsherds, predominantly from storage jars, can be

<sup>49</sup> See also photograph D-DAI-Z-Arch-FWH-F-KB-sw-075-09.

<sup>50</sup> Vercoutter 1962: pl. XXa.

<sup>51</sup> See chapter 6.2.1.

<sup>52</sup> See Vercoutter 1962: 280, fig. 8. Room U is erroneously labelled D on the plan.

<sup>53</sup> Provided that the debris was not part of the original plan as a fill; the evidence for such use of material in the palace is lacking, however.

noted in the same area, including at least one large fragment of a cylindrical jar with short conical neck (form J154). Abutting the exterior wall, podium structure WBN 166 is visible. Only the outer walls of the structure are cleared enough to allow interpretation; its inner structure remains unclear. The outer walls consist of minimum three courses of fired bricks built in a regular fashion, thus excluding the possibility that the structure represented a short staircase or ramp providing access from the west. The outer face of the structure was plastered, and it thus most likely belonged to the same building phase as the palace itself. Behind, rooms WBN 104-WBN 106 can be seen, formed by two antechambers and a larger room. A light wall between antechambers of rooms WBN 105 and WBN 106 is well-visible. This wall was marked as secondary in Hinkel's plan<sup>55</sup> and as being built of mudbrick; neither can be confirmed from the photograph. On the right, room WBN 160 is captured; the brick structure in the room, best visible on photograph SAS.060, can be seen from a slightly different point of view. At the highest point of the excavated remains of the palace, fired brick (?) walls likely pertaining to the upper storey of the building can be seen.56

**SAS.062:** The photograph captures the second season at the end of excavations. A large part of the western exterior wall is captured, spanning rooms WBN 109 to WBN 159. Other rooms further to the east can be identified. In the foreground, sand-stone blocks, column drums, bases, and capitals, as well as pot-sherds can be seen, redeposited in the exterior of the building. Numerous features visible on photographs SAS.048–050 and SAS.056 can be observed on the photograph.

**SAS.063:** The photograph captures the second season at the end of excavations. In the foreground, a part of podium structure WBN 166 is captured, with rooms WBN 105 and WBN 106 behind. The brickwork of the podium is relatively well-visible, although the character of its internal structure is still unclear; the inclined brick on the right is notable, however. The light wall between antechambers to both rooms is well-visible, which was marked as secondary in Hinkel's plan.<sup>57</sup> The photograph does neither confirm nor rule out his observation. The wall also does not seem to be built of fired bricks, as designated by Hinkel.

**SAS.064:** The photograph captures the second season at the end of excavations. Room WBN 104 is captured, viewed towards the north-west. In the foreground, the rear part of the room is well-visible. The floor seems to be formed by white nodules of *sāra* or lime and pebbles. The entrance to the rear room has fired brick threshold or threshold base partly uncovered. On the right, a part of room WBN 105 is visible; the light wall between antechambers to rooms WBN 105 and WBN 106 marked as secondary in Hinkel's plan<sup>58</sup> can also be noted. In the background, sandstone blocks and column drums redeposited in the exterior of the building can be seen.

56 See photographs SAS.031-032.

**SAS.065:** The photograph captures the second season at the end of excavations. Room WBN 105 is captured, viewed towards the north-west. A part of room WBN 106 can be seen on the right. In the foreground, the rear part of room WBN 105 is well-visible. The floor seems to be formed by white nodules of *sāra* or lime and pebbles. A trial pit was excavated in the northwestern corner of the room in order to examine the foundations. A similar trial pit seems to be set in the second antechamber. The light wall between antechambers to rooms WBN 105 and WBN 106 marked as secondary in Hinkel's plan<sup>59</sup> can be noted. In the background, sandstone blocks and column drums redeposited in the exterior of the building can be seen. Further to the north-west, surface cleaning of wall WBN 171 had been carried out.

**SAS.066:** The photograph captures the second season at the end of excavations. The light wall between antechambers of rooms WBN 105 and WBN 106 is captured, viewed towards the north-west. The wall was marked as secondary in Hinkel's plan<sup>60</sup> and built of fired bricks; the photograph does not allow to confirm either.

SAS.067: The photograph captures the second season at the end of excavations. The north-eastern corner of the palace is captured, viewed towards the west. In the foreground, the debris from the exterior wall, excavated in trench T55,61 can be seen left in situ. The fortified corner of the exterior wall can be noted. Further to the west, podium structure WBN 167E abuts the northern exterior wall or possibly it is bound with it. The podium structure consists of outer light walls made of fired bricks, of which at least seven courses are preserved, laid in a regular fashion (i.e. forming a vertical wall). Nothing points to a former presence of an inclined surface such as a staircase or a ramp. Several light walls connect the northern outer wall of the podium structure and the exterior wall of the palace. They likely served as supports. Further to the west, ramp WBN 167W is visible, clearly separated from the latter structure.<sup>62</sup> By the eastern exterior wall, rooms WBN 152-153 are well-visible. Walls forming other rooms further to the west can be identified. Notably, walls of room WBN 146 do not seem to be built of fired bricks as marked in Hinkel's plan,63 at least in the upper part of the wall. This is in concord with Hinkel's note in one of his working variants of the plan.<sup>64</sup>

**SAS.068:** The photograph captures the second season at the end of excavations. In the foreground, ramp WBN 167W can be seen, viewed from the north-east. The original surface of the ramp, preserving its ascent and leading to room WBN 120, is well-visible. On the very left, fired-brick-cased north-eastern corner of the ramp is relatively well-defined, leaving no doubt that WBN 167W and WBN 167E represent two separate structures. The ramp was clearly coated with lime plaster, well-preserved on most of its northern face. Room WBN 120, likely the

<sup>54</sup> See chapter 5.1.6.1.

<sup>55</sup> Hinkel – Sievertsen 2002: pl. IX.75.

<sup>57</sup> Hinkel - Sievertsen 2002: pl. IX.75.

<sup>58</sup> Hinkel - Sievertsen 2002: pl. IX.75.

<sup>59</sup> Hinkel – Sievertsen 2002: pl. IX.75.

<sup>60</sup> Hinkel - Sievertsen 2002: pl. IX.75

<sup>61</sup> See chapter 3.11.

<sup>62</sup> Cf. Hinkel - Sievertsen 2002: pl. IX.75.

<sup>63</sup> Hinkel – Sievertsen 2002: pl. IX.75.64 Hinkel Archive, D-DAI-Z-Arch-FWH-Z1227.

same one as captured on photograph SAS.015, has well-preserved southern wall, which indicates that no opening was situated at this level between rooms WBN 119 and WBN 120. Above the ramp, walls forming two elongated rooms WBN 107–108 can be noted.

**SAS.069:** The photograph captures the start of excavations at one of the *koms*. Given the ascent of the terrain that can be noted around the dig, it is possible that *kom* B is the one being excavated. Loose soil, likely with large white nodules, overlies fired brick debris.

**SAS.070:** The photograph captures the second season at the end of excavations. The photograph captures a mudbrick wall, likely in the palace, and a rough surface in front of it, which perhaps represents the floor of the room. The room cannot be identified.

**SAS.072:** The photograph captures the second season at the end of excavations. The scene captured is similar to photographs SAS.048–050 and SAS.056. The excavated palace is viewed from the west; a large part of the western exterior wall is visible (rooms WBN 160 to WBN 101). In room WBN 160, a light construction is visible.<sup>65</sup> The eastern wall of room WBN 158 seems to retain some of its white interior plasters. Sandstone column bases, drums, and capitals are redeposited in the foreground, together with some potsherds. In the very foreground, sondage 1<sup>66</sup> with excavated remains of light buildings and a vessel embedded in the floor can be seen.

**SAS.073:** The photograph captures the second season at the end of excavations. The scene captured is similar to photographs SAS.048–050, SAS.056, and SAS.072.

**SAS.074:** The photograph captures the second season in the course of excavations. The photograph captures two column capitals and one column drum. The capital in the foreground can be identified as the one belonging to capital type  $3^{67}$  with three Amun ram heads with sun-discs over the nb/hb-sign or an aegis. The identification of the second column capital is possible based on comparison with photograph SAS.079 and Fig. 9 in Vercoutter's report, situated to room C (WBN 156). The parts of columns rest on a layer of debris. Based on the other photographs, it is possible to conclude that this debris overlay regular brickwork forming the western pillar in room WBN 156. In the background, the northern and western walls of the room can thus be seen.

**SAS.075:** The photograph captures the second season in the course of excavations. A composite capital of capital type 2<sup>68</sup> is captured, fully unearthed. Based on information from Vercoutter's report,<sup>69</sup> the capital was found in room WBN 156, similar to capitals on photograph SAS.074.

**SAS.076:** The photograph captures a scene similar to SAS.075; the composite column capital is captured from a different angle.

**SAS.077:** The photograph captures the second season in the course of excavations. A composite column capital of capital type 2<sup>70</sup> is captured, most likely redeposited between the palace and the southern spoil heap, which is visible in the background. The capital was found roughly in this position by the Archaeological Expedition to Wad Ben Naga in 2009.<sup>71</sup> Behind, other sandstone architectural elements can be seen, as well as at least one large fragment of a jar.

**SAS.078:** The photograph captures a scene similar to SAS.077; the composite column capital is captured from a different angle. Spoil heap (?) can be noted in the background.

**SAS.079:** The photograph captures a scene similar to SAS.074; viewed from a different angle. The two column capitals and a column drum rest on a debris overlying the regular brickwork of the western pillar in room WBN 156. To the left, the other pillar is likely captured and above it the eastern wall of the room and still unexcavated part of the *kom* with tools and shoes (?) lying on its surface. In the background, the southern spoil heap is in the process of formation.

SAS.080: The photograph captures object SNM 62/10/161.

**SAS.081:** The photograph captures objects SNM 62/10/23, SNM 62/9/107, and SNM 62/10/167. The photograph shows the objects in their archaeological context in room WBN 135.

SAS.082: The photograph captures object SNM 62/10/167b.

**SAS.083:** The photograph captures object SNM 62/10/167a (?) in its archaeological context in room WBN 135.

**SAS.084:** The photograph captures object SNM 62/10/167c (?) in its archaeological context in room WBN 135.

**SAS.085:** The photograph captures objects SNM 62/9/107 and SNM 62/10/23.

SAS.086: The photograph captures objects SNM 62/10/23.

**SAS.087:** The photograph captures a scene similar to photograph SAS.085.

SAS.088: The photograph captures objects SNM 62/9/107.

SAS.089: The photograph captures object SNM 62/9/107.

**SAS.090:** The photograph captures object SNM 62/10/23.

**SAS.091:** The photograph captures object SNM 62/10/23.

**SAS.092:** The photograph captures object SNM 62/10/23.

**SAS.093:** The photograph captures object SNM 62/9/107.

**SAS.094:** The photograph captures object SNM 62/10/23.

**SAS.095:** The photograph captures object SNM 62/10/23.

SAS.096: The photograph captures object SNM 62/9/107.

**SAS.097:** The photograph captures object SNM 62/9/107.

**SAS.098:** The photograph captures object SNM 62/10/23.

**SAS.099:** The photograph captures object SNM 62/10/23.

**SAS.100:** The photograph is identical to photograph SAS.097. **SAS.101:** The photograph captures object SNM 62/10/162.

<sup>65</sup> See photograph SAS.060.

<sup>66</sup> See Vercoutter 1962: 275; Vrtal 2017: 69.

<sup>67</sup> See chapter 6.2.6.

<sup>68</sup> See chapter 6.2.6.

<sup>69</sup> See Vercoutter 1962: fig. 10.

<sup>70</sup> See chapter 6.2.6.

<sup>71</sup> See chapter 3.1. See also photographs D-DAI-Z-Arch-FWH-F-KBsw-084-17–19.

**SAS.102:** The photograph captures object SNM 62/10/162.

**SAS.103:** The photograph captures object SNM 62/9/101.

**SAS.104:** The photograph captures a scene similar to photograph SAS.103.

**SAS.105:** The photograph captures object SNM 11949 in its archaeological context (?) during the first season in March 1959. The presence of lime plaster to the right might indicate that the statue was uncovered close to a brick moulding on the exterior wall.

**SAS.106:** The photograph captures a scene similar to photograph SAS.105.

SAS.107: The photograph captures object SNM 62/10/160.

**SAS.108:** The photograph captures object SNM 62/10/160 in its archaeological context (?) in room WBN 156 in December 1959.

SAS.109: The photograph captures object SNM 62/10/149.

SAS.110: The photograph captures object SNM 62/10/149.

**SAS.111:** The photograph captures object SNM 62/9/40.

**SAS.112:** The photograph captures object SNM 62/9/42.

**SAS.114:** The photograph captures object SNM 62/9/41.

**SAS.115:** The photograph captures object SNM 62/10/138.

**SAS.116:** The photograph captures object SNM 62/10/79 (?).

**SAS.117:** The photograph captures object SNM 62/10/148.

SAS.118: The photograph captures object SNM 62/9/55.

SAS.119: The photograph captures object SNM 62/9/37b.

**SAS.120:** The photograph captures object SNM 62/9/69.

**SAS.121:** The photograph captures object SNM 62/9/34.

**SAS.122:** The photograph captures the second season of excavations. The room on the photograph can be identified as WBN 104 based on the artefacts captured in their archaeological context. The photograph was likely taken on 11 January 1960. In the foreground, one of the two easternmost sections of the room is captured, viewed from the east. In the debris of sand, soil, pebbles, and mudbrick fragments (?), a number of artefacts is buried, which can be identified as the following objects (from the foreground towards the back): SNM 62/9/43, SNM 62/9/66, SNM 62/10/4, SNM 62/10/5, SNM 62/9/77, an unidentifiable ceramic (?) bowl, SNM 62/9/68, SNM 62/10/170, and one of strainers SNM 62/9/25, SNM 62/9/26, and SNM 62/10/49. Traces of burnt wood and ash can be noted over ivory tusks SNM 62/9/68.

SAS.123: The photograph captures object SNM 62/9/43.

**SAS.124:** The photograph captures object SNM 62/9/66.

**SAS.125:** The photograph captures a scene similar to photograph SAS.122.

**SAS.126**: The photograph captures a scene similar to photographs SAS.122 and SAS.125.

**SAS.127:** The photograph captures a scene similar to photographs SAS.053–054. It shows four pillars and the northern wall of room WBN 103. Remains of plaster can be noted on the wall. Burnt beams of palmwood can be seen between both pairs of pillars and by the wall, resting on debris. A large stor-

age jar, likely embedded in the debris and reused as an oven, can be seen on the left.

**SAS.128:** The photograph captures a scene similar to photographs SAS.053–054 and SAS.127.

SAS.129: The photograph captures the second season of excavations. One of rooms in the northern part of the palace is captured, viewed towards the north. The room can be most likely identified as WBN 126.72 In the foreground, burnt beams of wood can be noted. In the room, at least six (?) storage jars of the same type (ovoid jar with short conical neck, form J273) can be noted, deposited upside down. The jars and the room must be the same ones as on photographs SAS.148, D-DAI-Z-Arch-FWH-F-KB-sw-084-16, and Shinnie exp. neg. 1419.74 Likely a neck of another jar of the same form is deposited on the wall; another complete jar is situated behind, together with numerous fragments of necks and/or bowls and a tall conical vessel with a flat base (?). In the background, a workman can be noted in the area of the northern spoil heap. To the left, several complete jars are situated, likely modern zirs used by workmen. On the horizon, the railway station (Mahatta) can be seen.

**SAS.130:** The photograph captures a scene similar to photographs SAS.053–054 and SAS.127–128. On the top, rooms WBN 158 and WBN 159 can be noted, whose walls retain remains of plaster coating.

**SAS.131:** The photograph captures object SNM 62/9/72.

SAS.132: The photograph captures object SNM 62/9/72.

**SAS.133:** The photograph captures object SNM 62/9/72.

**SAS.134:** The photograph captures object SNM 62/9/29.

SAS.135: The photograph captures object SNM 62/9/106.

**SAS.136:** The photograph captures the second season of excavations. The room captured can be identified based on the objects as room WBN 108 (?);<sup>75</sup> viewed from the north or west. Fifteen spherical blackware jars with narrowing neck (form J10<sup>76</sup>) are deposited upside down in loose soil. Most of the jars can be identified as follows:

(left row, from the front): (1) SNM 62/10/141 or SNM 62/10/156, (2) SNM 62/10/150, (3) SNM 62/10/155, (4) SNM 62/10/154, (5) SNM 62/10/151, (6) SNM 62/10/141 or SNM 62/10/156, (7–9) unidentifiable

(*right row, from the front*): (10) SNM 62/10/152, (11) SNM 62/10/142, (12) SNM 62/10/140, (13–15) unidentifiable

**SAS.137:** The photograph captures object SNM 62/10/143.

**SAS.138:** The photograph captures object SNM 62/10/123.

**SAS.139:** The photograph captures object SNM 62/9/98.

**SAS.140:** The photograph captures object SNM 62/10/21.

**SAS.141:** The photograph captures objects SNM 62/10/49 (*right*) and SNM 62/9/26 (*left*).

73 See chapter 5.1.6.1.

<sup>72</sup> See the preserved shape of the northern wall and fig. 1.3.

<sup>74</sup> See also Shinnie 1967: pl. 9.75 See chapter 2.2.3.5.

<sup>76</sup> See chapter 5.1.6.6.

SAS.142: The photograph captures object SNM 62/10/38.
SAS.143: The photograph captures object SNM 62/10/35.
SAS.144: The photograph captures object SNM 62/10/35.
SAS.145: The photograph captures object SNM 62/9/39.

**SAS.146:** The photograph captures object SNM 62/10/37.

SAS.147: The photograph captures object SNM 62/9/97.

**SAS.148:** The photograph captures the second season of excavations. The minimum of 38 storage ovoid jars with short conical neck (form J2<sup>77</sup>) are captured, deposited upside down in one of the rooms. No other vessel forms seem to be present. Some of the jars are covered with patches of white substance, likely disintegrated plaster. The room can be identified with WBN 126 based on comparison with photographs SAS.129, D-DAI-Z-Arch-FWH-F-KB-sw-084-16, and Shinnie exp. neg. 1419.<sup>78</sup> Remains of some of the jars are also visible in the room on a later aerial photograph (fig. 1.3).<sup>79</sup>

**SAS.149:** The photograph captures the second season of excavations. In the foreground a mastaba-like structure is set against a partition wall, with three large vessels embedded into it. The middle vessel is likely an ovoid jar with short conical neck (form J2<sup>80</sup>) and the bottom broken off. The absence of ash in the vessels is striking and unless it was removed during excavations, it may indicate other function than cooking. In the background, one (or two?) semi-circular structures can be seen along the wall(s). The rooms captured on the photo cannot be directly identified; rooms WBN 149 and WBN 150 seem the most likely candidates based on the layout of the walls.

**SAS.150:** The photograph captures the second season of excavations. Four large storage jars are captured, embedded in the soil and likely serving as ovens. One vessel can be identified based on the wide mouth and the small ledge rim as a vat of form B4b<sup>81</sup> with the bottom broken off. The room can be tentatively identified as WBN 111 based on a comparison with photographs SAS.022 and Shinnie exp. neg. 1423,<sup>82</sup> on which the same vessels seem to be captured.

**SAS.151:** The photograph captures the second season of excavations. In the foreground, a large body fragment of a storage jar (cylindrical form J1<sup>83</sup>?) is embedded in the ground; another smaller vessel is embedded in this jar. Behind, still another jar is embedded in the ground. In the background, offering stand SNM 62/10/167a (?) can be seen, in the same position as on photograph SAS.083. The room captured can be identified based on the latter evidence as room WBN 135. Photographs SAS.022 and D-DAI-Z-Arch-FWH-F-KB-sw-075-10 also likely show the position of the vessels in the room.

**SAS.152:** The photograph captures the second season of excavations. Three vessels are depicted in the foreground: likely a large cylindrical jar with short conical neck (form J1<sup>84</sup>) embedded in the ground, into which a smaller jar is inserted. By the wall, a vat (form B4b<sup>85</sup>) is deposited. On the left, a large rectangular block of sandstone with a plastered side can be seen. Lime or whitewashed mud plaster is partly preserved on the wall. The plaster is heavily blackened by fire, which can be the result of both conflagration and cooking activities. The room or place by the exterior wall captured on the photograph cannot be identified.

**SAS.153:** The photograph captures the second season of excavations. The room captured can be identified as WBN 134, viewed towards west. In the foreground, two storage jars with their tops broken off at shoulders and one completely shattered jar (?) are situated, embedded in the ground, possibly as ovens. Another such jar can be seen in the north-western corner of the room and still another is situated by the entrance.<sup>86</sup> In the background, the northernmost pair of sandstone columns in room WBN 154 can be noted, and the entrance to room WBN 157, with a floor ascending towards the west and perhaps representing the surface of a ramp.

**SAS.154:** The photograph captures the second season of excavations. Three storage jars embedded in the ground and reused as ovens can be seen. The room on the photograph cannot be identified, the preserved height of the wall nevertheless indicates that it comes from the Palace of Amanishakhete.

**SAS.155:** The photograph captures the first season of excavations in February 1959. Object SNM 11957 can be seen in the foreground, as excavated by the archaeologists during clearing of the exterior wall of the palace. The surrounding debris seems to constitute of soil from dissolved mudbricks and disintegrated lime plaster.

**SAS.163:** The photograph captures the second season at the end of excavations. The eastern exterior wall of the palace is captured from the area of the Small Temple, spanning the area between room WBN 139 and room WBN 153; a scene similar to photographs SAS.011–012. Remains of walls of other rooms in the eastern part of the palace can be discerned. In the foreground, column drums are deposited to the east of the palace. Still to the east, mid-way between the palace and the Small Temple, fragments of a sandstone statue of Sebiumeker (?) (object SNM 62/10/162)<sup>87</sup> are deposited.

**SAS.164:** The photograph captures a scene similar to photograph SAS.163. Rooms WBN 139 to WBN 143 are captured. On the very left, near the southern spoil heap, sandstone column drums and capitals can be noted, as well as a large pile of bricks.

**SAS.165:** The photograph (cropped) captures the first season in the course of excavations. In the background on the left, the

<sup>77</sup> See chapter 5.1.6.1.

<sup>78</sup> Shinnie 1967: pl. 9.

<sup>79</sup> Gerster 1964: 94–95.

<sup>80</sup> See chapter 5.1.6.1.

<sup>81</sup> See chapter 5.1.2.5. The vessel is perhaps the same one that can be seen redeposited by the southern spoil heap on photograph D-DAI-Z-Arch-FWH-F-KB-sw-084-17.

<sup>82</sup> Shinnie 1967: pl. 7.

<sup>83</sup> See chapter 5.1.6.1.

<sup>84</sup> See chapter 5.1.6.1.

<sup>85</sup> See chapter 5.1.2.5.

<sup>86</sup> It is indistinct on account of the shadow, see photograph D-DAI-Z-Arch-FWH-F-KB-sw-075-10.

<sup>87</sup> Vercoutter 1962: 275-277; cf. Preliminary Report 1: pls. 7-8.

north-eastern corner of *kom* B prior to excavation can be noted. The surface appears to consist of sand, disintegrated plaster, and brick fragments.

**SAS.166:** The photograph (cropped) captures a scene similar to photograph SAS.165. In the background on the right, the south-eastern corner of *kom* B is captured. A possible sandstone block can be seen on the horizon. Notably, neither column drums nor fragments of the statue of Sebiumeker can be seen deposited in the area between the palace and the Small Temple, confirming Vercoutter's statement that object SNM 62/10/162 was found only during clearing of the perimeter of the palace.<sup>88</sup>

**SAS.174:** The photograph (cropped) captures the first season of excavations at the turn of 1958 and 1959. In the foreground, there is the fully cleared Eastern Temple. In the background to the left, the *kom* with the remains of the Small Temple and three tumuli (?) can be seen. To the right, *kom* B with the remains of the palace can be noted. On the latter, in the south-east, a few small mounds may also indicate the presence of at least three tumuli. The northern side of the *kom* is covered with fired brick fragments, while the summit and the eastern part of the *kom* seem to consist of sand or white nodules. On the very summit, remains of walls can be seen.

**SAS.194:** The photograph captures the first season in the course of excavations. In the background, above the wall of the Circular Building, *kom* B is captured from the south, before excavation. A possible sandstone block, visible on photograph SAS.166, can be noted on the surface.

**SAS.197:** The photograph may capture object WB 59/60 51, provided that the latter is not identical with object SNM  $62/9/42.^{89}$ 

SAS.198: The photograph captures object SNM 62/9/40.

**SAS.199:** The photograph may capture object WB 59/60 51, provided that the latter is not identical with object SNM  $62/9/42.^{90}$ 

SAS.206: The photograph captures object SNM 62/10/79.

SAS.207: The photograph captures object SNM 62/10/170 (?).

**SAS.208:** The photograph captures object SNM 62/10/57.

**SAS.209:** The photograph captures object SNM 62/10/17.

SAS.210: The photograph captures object SNM 62/10/26.

**SAS.211:** The photograph possibly captures one of ovoid jars with short conical neck (form J2<sup>91</sup>) visible on photographs SAS.129 and SAS.148.

**SAS.212:** The photograph possibly captures object SNM 62/10/166. It shows an ovoid jar with short conical neck (form

90 See photograph SAS.197.

91 See chapter 5.1.6.1.

J2<sup>92</sup>); the neck is missing. No vessel of this shape is captured on photographs of other structures excavated in 1958–1959; the palace is thus a reasonable possibility for its localisation.

**SAS.213:** The photograph captures parts of two cylindrical jars with short conical neck (form J1<sup>93</sup>), embedded in the ground and reused as ovens. A fragment of a deep ledge-rimmed bowl (form B2<sup>94</sup>) is situated on top of the right jar. No vessels of this shape were captured on photographs of structures excavated in 1958–1959; the palace is thus a reasonable possibility for their localisation. A fired brick wall with plaster preserved indicates that the vessels were situated in the exterior.

**SAS.215:** The photograph likely captures the second season of excavations. Parts of two jars are captured, embedded in the ground and likely serving as ovens. The vessels seem to be set in a floor-like layer. In the background, high mudbrick walls can be noted, which situate the find to an unidentifiable room in the palace.

**SAS.216:** The photograph captures the second season of excavations. The room can be identified as room WBN 135. A vessel embedded in the ground and serving as an oven is situated in the centre; object SNM 62/10/23 lies nearby.

**SAS.222:** The photograph captures the second season of excavations. The area captured cannot be identified from the photograph. It is nevertheless taken from the same spot as Hinkel's photograph D-DAI-Z-Arch-FWH-F-KB-sw-075-07, which allowed its localisation. In the centre, a pit for a stretched burial was cut into mudbrick wall WBN 128/148. The head was oriented to the south, the deceased was laid on the right side. Room WBN 145 on the top left remains largely unexcavated on the photograph. Two quernstones (?) or a quernstone and a conical weight are deposited on wall WBN 145/148.

## 2.1.1.3 Other contemporary accounts

In addition to the photographic documentation by the archaeological mission, other archival sources can be consulted that captured the spatial context of the structure in the course of archaeological works or in the following years.

## 2.1.1.3.1 Friedrich W. Hinkel

Hinkel visited the site on numerous occasions between 1960 and 2000. Series of photographs capturing the palace, preserved in his archive kept by the Deutsches Archäologisches Institut,<sup>95</sup> come from his visits to the site on 2 March 1960<sup>96</sup> and 20 January 1961,<sup>97</sup> in October

96 Photographs D-DAI-Z-Arch-FWH-F-KB-sw-075-03-15.

<sup>88</sup> Vercoutter 1962: 275-277.

<sup>89</sup> See Appendix, cat. no. 29. There are discrepancies in the dimensions between the find entry for libation basin WB 59/60 51 and the accessioned libation basin SNM 62/9/42. The libation basin on photograph cannot be identified with any of the libation basins accessioned in the Sudan National Museum. Neither the basin on the photograph nor basin SNM 62/9/42 have pierced walls between the compartments, as stated in the find entry for basin WB 59/60 51.

<sup>92</sup> See chapter 5.1.6.1.

<sup>93</sup> See chapter 5.1.6.1.

<sup>94</sup> See chapter 5.1.2.3.

<sup>95</sup> The present author is grateful to Martina Düntzer, Deutsches Archäologisches Institut, for the possibility to access the files.

<sup>97</sup> Photographs D-DAI-Z-Arch-FWH-F-KB-sw-084-13-19.





SAS.002



SAS.003





SAS.005











SAS.010







SAS.012





SAS.014



SAS.016





SAS.017









SAS.021





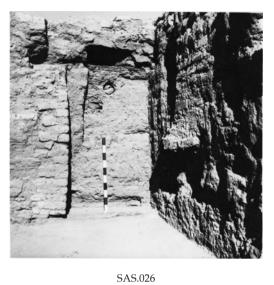
SAS.022



SAS.024

SAS.023





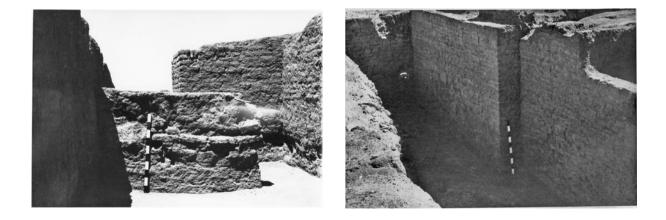


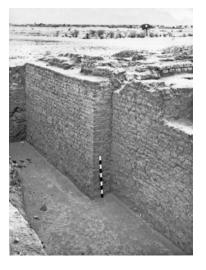


SAS.028



SAS.029







SAS.033



SAS.034



SAS.035





SAS.036



SAS.038



SAS.039





SAS.042



SAS.041







SAS.046





SAS.047









SAS.051





SAS.052







SAS.054

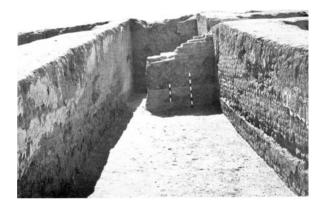








SAS.059



SAS.060





SAS.061





SAS.064



SAS.065





SAS.067



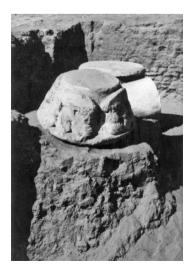


SAS.070





SAS.072



SAS.073



SAS.075