

## 5. FORTIFICATIONS

(Fig. 7)

Of the fortification walls surrounding the town, remains on the north, south and west sides still exist. These remains enable a secure reconstruction of at least these three sides of the fortification walls, resulting in a north-south extension of the town of 242m. In regard to the eastern side, hardly any evidence of the former city wall has so far been traced. Previously, one had assumed that the cliffs along the Nile had reached further to the east and had at some point in time collapsed, together with the eastern fortification wall.<sup>63</sup> Through the recent examinations, however, it is now clear that the sandstone cliffs and the water table of the Nile have not changed considerably since antiquity<sup>64</sup> and therefore the city wall must have been situated further to the west than previously assumed. Instead of an east-west extension of 140m, as originally presumed, only about 120m can be accounted for.<sup>65</sup> In the course of his examinations in 2014, Erich Draganits assumed that remains of a mudbrick wall directly to the east of Temple A actually belonged to the fortification wall,<sup>66</sup> which, however, cannot be verified at this time. In any case, the eastern enclosure wall must have been situated close to the eastern side of Temple A and also the so-called governor's palace SAF2, possibly only leaving a relatively narrow gap for a proposed wall street.<sup>67</sup>

The remains of the fortifications on the southern side of the town can be traced to a length of 41.80m

and up to a height of about 2.40m (Pls. 16 and 17.1).<sup>68</sup> They are situated to the south of Rue EO4 and the row of magazines M1–M7. To the west, the city wall was overbuilt by the Ottoman fort, using the Pharaonic fortification as a substructure, while the eastern part of the southern enclosure wall has completely deteriorated. The width of the fortifications in the south is 4.40m, consisting of mudbricks of the format 40 × 19 × 9cm, which were laid in alternating layers of headers and stretchers.<sup>69</sup> On the outside of the wall, the remains of two small towers or buttresses<sup>70</sup> can still be seen. The western one, situated directly to the east of the southern gate, is better preserved and measures 2.23 × 2.34m (N–S). Of the eastern one, only sparse remains on floor level still exist. Nevertheless, the eastern tower or buttress can be reconstructed measuring 2.56 × 2.30m with the distance between the two protrusions measuring 11.96m. A simple 1.68m wide gate is situated directly next to the western protrusion (Pl. 17.2). In a later period it was closed off with walls on the northern and southern sides. This gate lies opposite of House H5 and has no direct connection to any north-south oriented street. Even though no clear evidence remains, it seems plausible that there was also a tower or buttress directly to the west of the gate. The fortification wall in that area is badly damaged, and the face of the wall is irregular, which could indicate that a tower bonded to the city wall existed here.

<sup>63</sup> AZIM 1975, 94, pl. II; 122; GEUS 2004, 115, fig. 89; MORRIS 2005, 86, fig. 13; DOYEN 2009, 18.

<sup>64</sup> DRAGANITS 2014, 22; BUDKA 2014b, 60; BUDKA 2015b, 67; BUDKA 2016.

<sup>65</sup> Cf. BUDKA 2014b, 60; BUDKA 2016; BUDKA forthcoming. Compared to the more or less square-shaped layout of the fortified towns of Sesebi (270 × 200m) and Amara West (c. 100 × 100m), the layout of Sai is thus surprisingly elongated. For a plan of Sesebi see SPENCE/ROSE 2011, 34, fig. 1; UPHILL 1988, 37, fig. 16. For an overview plan of Amara West see SPENCER/STEVENS/BINDER 2014, inside of the back cover.

<sup>66</sup> DRAGANITS 2014, 22.

<sup>67</sup> The new excavation area SAVI Northeast from the field campaign 2016 could shed some light on the position of the eastern enclosure wall. Here, a few bricks possibly belong-

ing to the fortification were uncovered (Fig. 7). Personal communication by J. Budka. By reconstructing the wall at this location, the presumed wall street at SAF2 would be about 1.05m wide.

<sup>68</sup> Cf. AZIM 1975, 120–121.

<sup>69</sup> This layering method is very common and is also attested for at the Nubian forts of the Middle Kingdom. See VOGEL 2004, 120.

<sup>70</sup> Cf. VOGEL, 2004, 121–122; VOGEL 2009, 177. As opposed to older reconstructions (cf. EMERY/SMITH/MILLARD 1979), she proposes that the protrusions on the fortification walls of Buhen were not actually towers, but rather abutments that were about two-thirds of the height of the wall with the purpose of distributing the load on the wall. This could also have been the case at Sai, especially considering the small size of the abutments at roughly 2.50 × 2.50m.



Fig. 7. Plan of the Pharaonic town of Sai in its topographical setting

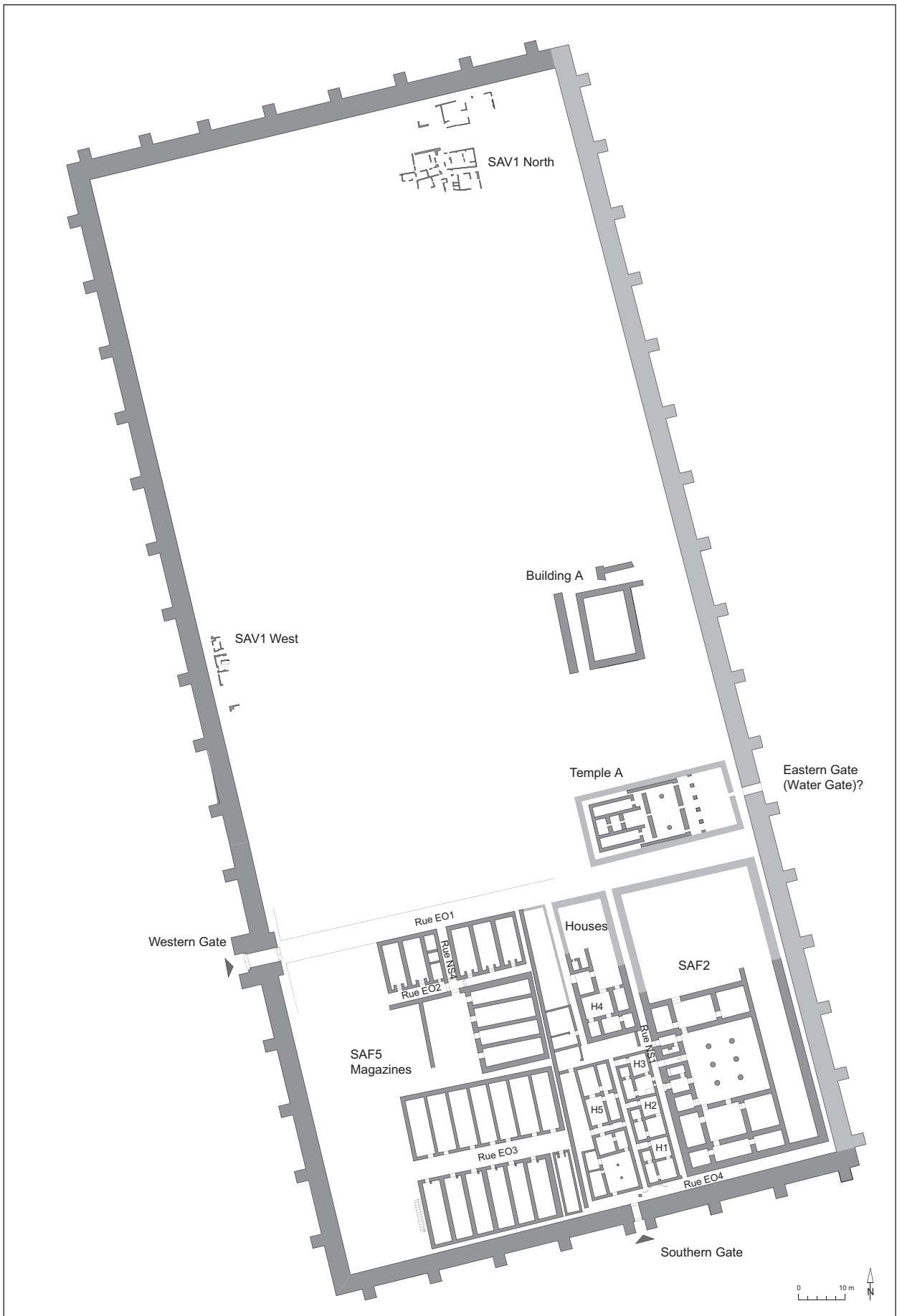


Fig. 8. Reconstruction plan of the Pharaonic town of Sai

On the north side of the town, remains of the enclosure wall were excavated during the campaigns in the years 2008 to 2012 (Pl. 17.3).<sup>71</sup> They can be traced to a length of 39.32m and show similar results as in the southern part of town, with the enclosure wall being 4.26m thick, composed of ten rows of mudbrick headers alternating with layers of stretchers. Bricks laid in various positions existed as well. No gate was discovered in this part of the town wall, but a small protrusion, measuring 2.64 × 2.12m existed on the outer side, similar to the southern side of the fortification. In addition, a curtain wall surrounding the original bastions is proposed as well as an enlargement of the protrusion during Pharaonic times.<sup>72</sup>

During the recent excavations in 2014–2015, another part of the enclosure wall was uncovered in SAV1 West, on the western side of the settlement.<sup>73</sup> This newly excavated part of the wall exactly followed the presumed course of the fortification, as proposed by previous surveying,<sup>74</sup> and in line with the remains at SAF4 further to the south. Here, the thickness of the wall was about 4.30m and the building technique was identical to those of the northern and southern parts of the enclosure wall.

Further to the south remains of the western city gate exist, which presumably was the main gate (Pl. 18). Even though the remains are sparse and preserved only at floor level, it is possible to reconstruct the former layout of this gate. It was situated in the axis of the main east-west street Rue EO1, which led from the gate to Temple A.<sup>75</sup> Remains of four stone thresholds in a row can be found here, whereby only the two eastern ones seemed to have belonged to the original city gate, the others stem from a later period. The two original thresholds were situated between two massive walls, with an inner width of the gate of about 3.05m. The length between the two thresholds was 6.87m. To the west

two towers flanked the entrance, protruding out for a further 2.35m. On the inner (eastern) side of the wall were protrusions as well, albeit smaller at 0.60m. These structures are all documented by singular parts of the walls still remaining *in situ*, where mostly only a few of the mudbricks on floor level exist. The possibility of a ditch on the western side of the gate, as proposed by Azim,<sup>76</sup> must remain unanswered. The current state of the site allows no interpretation of a ditch, nor has a ditch been yet established at SAV1 West.<sup>77</sup> Moreover, a wall to the west of the city gate that Azim had interpreted as a terracing wall situated on the eastern side of the ditch<sup>78</sup> seems to have been erected at a later date, taking the building material with a small brick format and the building technique into account.<sup>79</sup>

So far it is not known if a further gate had existed somewhere along the missing parts of the enclosure wall. Looking at the Nubian Middle Kingdom forts, the main gate was always facing the desert,<sup>80</sup> so it seems plausible to address the western gate at Sai as the main gate. In general, smaller and less fortified gates – so-called water gates – were nearer to the water and often offered direct access to a stairway leading to the Nile.<sup>81</sup> That the southern gate at Sai actually represented this water gate cannot be verified, since no walkway to the Nile has so far been discovered. It seems plausible, however, that at least one other gate existed at the eastern side of the enclosure wall, since here the fortification is situated on the cliffs bordering the river. Thus, in the reconstruction of the town (Fig. 8) a small gate is proposed on the eastern side at Temple A. In view of the possibility of a landing place for ships to the north of the temple site, as proposed by J. Budka and S. Neogi,<sup>82</sup> a gate situated here is even more feasible.

As for the 3-D reconstruction of the fortifications (Pl. 55), it must be noted that the *in situ* remains were not very high and therefore the height

<sup>71</sup> Fieldwork conducted by the Sai Island Archaeological Mission of Lille 3, directed by D. Devauchelle. See DOYEN 2009, 17–20; BUDKA /DOYEN 2013, 167–208; DOYEN 2014, 367–375.

<sup>72</sup> Cf. BUDKA/DOYEN 2013, 178.

<sup>73</sup> BUDKA 2014b, 63–65; BUDKA 2015a, 45–46.

<sup>74</sup> Cf. AZIM 1975, 120–122.

<sup>75</sup> See AZIM 1975, 120–121, pl. XIV. For the description of Rue EO1 see Chapter 6. It must be noted that this street only exists as a reconstruction and the width of the street is an assumption based on the axis through the main gate.

<sup>76</sup> Cf. AZIM 1975, 120–122.

<sup>77</sup> BUDKA 2014b, 64.

<sup>78</sup> AZIM 1975, 120.

<sup>79</sup> The findings at SAV1 West show a similar result. Cf. BUDKA 2014b, 63–65.

<sup>80</sup> Cf. VOGEL 2010b, 299.

<sup>81</sup> Cf. VOGEL 2004, 125, VOGEL 2010b, 302. See also BUDKA forthcoming.

<sup>82</sup> Personal communication by J. Budka and S. Neogi. At Se-sebi four gates (one at each side) are attested for, at Amara West three gates. SPENCER 1997, pl. III; MORRIS 2005, 336, 676; SPENCE/ROSE 2011, 34, fig. 1; MORKOT 2012a and 2012b; VOGEL 2013, 83.

of the wall must remain unknown. In the 3-D reconstruction the elevation is assumed to be about 8.0m high.<sup>83</sup> The tower-like protrusions exist both on the northern and southern sides, therefore it seems logical to suppose that they were originally situated on all four sides. The respective distance between them is evident from the southern side, where the two still existing protrusions are about 12.0m apart from each other. However, at the excavations of SAV1 West no evidence of a projection on the outer side of the fortification could be determined on the entire length of the excavated wall (c. 18.0m).<sup>84</sup> While the western and southern gates were probably flanked by actual towers, a reconstruction with buttresses is favored over one with small towers, as already discussed above. Whether towers were situated also on the corners of the fortification wall must remain open; while this is certain for the Middle Kingdom fortresses in Nubia<sup>85</sup> and for the New Kingdom town of Amara West,<sup>86</sup>

the New Kingdom fortified town of Sesebi presumably had no towers at the corners.<sup>87</sup> The latter could have also been possible at Sai, especially in view of the fact that no remains of corner towers are attested for.

With this reconstruction it becomes clear that the enclosure wall is of limited fortifying purpose, especially when compared to the imposing Middle Kingdom fortresses. However, one must keep in mind that the New Kingdom fortified towns are also defined by a change of function. Rather than the almost exclusive military usage of the Middle Kingdom fortresses, a more varied and complex layout with at least one temple, storerooms and domestic and administrative buildings was attested for the newly established towns.<sup>88</sup> Nevertheless, it seemed important that these settlements appeared as strongholds, guaranteeing the control of Upper Nubia, particularly of the supplies of resources such as gold and the trade of goods.<sup>89</sup>

<sup>83</sup> Cf. the wall at the Middle Kingdom fortress at Buhen is assumed to be between 10.0 and 14.0m high. VOGEL 2009, 177. Since the actual fortifying function of the New Kingdom towns is by comparison diminished, the elevation of the walls was probably somewhat lower.

<sup>84</sup> BUDKA 2014b, 63–65.

<sup>85</sup> Cf. BADAWY 1966, 202; DUNHAM 1960 and 1967; STEINER 2008, 120; WILLIAMS 2012, 340–347.

<sup>86</sup> Cf. SPENCER 1997, pl. III and IV; see SPENCER/STEVENS/BINDER 2014, inside of the back cover, for a reconstruction of the town enclosure of Amara West.

<sup>87</sup> Cf. MORRIS 2005, 337–338, SPENCE/ROSE 2011, 34, fig. 1.

<sup>88</sup> Cf. KEMP 1972, 651; VOGEL 2013, 81.

<sup>89</sup> Cf. VOGEL 2013, 80; SNAPE 2014, 224; see also KEMP 1972, 653–654, who also points to the symbolic nature of the fortifications and notes that they seem to be copies of a type of temple enclosure wall in Egypt itself.



Fig. 9. The streets of SAV1