

# The Sphinxes Avenue Excavations to the East Bank of Luxor

Mansour Boraik

**Abstract** The Sphinxes Avenue extends from Karnak to Luxor temples for about 2,700 m. There is evidence that Queen Hatshepsut from the Eighteenth Dynasty had been the first to build this processional road, with sphinxes in her own likeness. However it was Amenhotep III, who first instituted the sphinx lined avenue between the 10th pylon of Karnak Temple and the precinct of Mut Temple and to the South of Khonsu temple at Karnak. Then the project was stopped during the reign of Akhnaten, but was continued by King Tutankhamun although the sphinxes have usurped, reworked and repositioned many times by later kings. The present sphinxes avenue dates back to the reign of Nectanebo I who inscribed various dedicatory texts on the bases of the sphinxes. The Sacred Road was first discovered in 1949 by Z. Ghonaim in front of Luxor temple. Subsequent excavations by M. Abdelqadr and M. Abdelraziq (between 1958 and 1964) substantially increased the initial exposure, revealing the Avenue from Luxor temple to the rear of Luxor Polis station which was existed in front of Luxor temple in 1936. By the end of these excavations, a total of sixty-two sphinxes had been revealed. Between 1984 and 1991 M. Al-Saghir excavated three more portions of the Avenue. The recent excavations started in 2005 in the different sectors according to the Luxor Governorate Strategy. The team working on this project had been under my direction from 2005 through 2013. The master plan of Luxor aims to excavate, to restore, and to install a site-management program designed to integrate the Avenue of Sphinxes into Luxor City. The recent excavations brought to light precious information that enriches our knowledge of Ancient Theban history.

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M. Boraik (✉)

Ministry of Antiquities of Egypt and Ex-Director General of Luxor, Cairo, Egypt  
e-mail: mansourboraik@yahoo.com

## 1 Introduction

One of the main aspects of Luxor Governorate Development projects was to reveal the processional road of the sphinxes avenue connecting Luxor and Karnak temples to the East of Luxor City. The sacred road extends from Karnak to Luxor temples for about 2,700 m. The excavations started in November 2005 in the different sectors of the sacred road according to the Luxor Governorate Strategy. Luxor Governorate was in charge of demolishing and removing the houses and the agricultural lands which occupied the upper level of the sites. The archaeological excavations team working on this project had been under my direction from 2005 through 2013. The excavations along the ancient road were divided into several sectors including the rams before the Gate of Euergetes (see plan 1). The excavations were started at the same time in sector I–IV along the ancient road from Luxor temple until the turnoff to Mut temple.

## 2 Historical Background

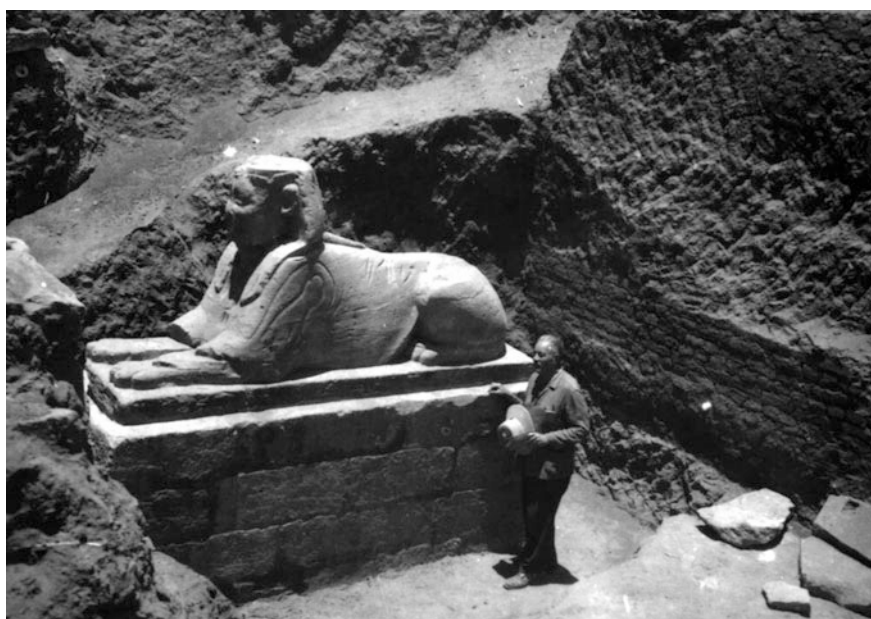
There is evidence that Queen Hatshepsut from the Eighteenth Dynasty had been the first to build this processional road, with sphinxes in her own likeness. This procession is depicted in the Red Chapel, where Hatshepsut burns incense before the six shrines, each of which is identified with its individual name. In Hatshepsut's time the procession to Luxor temple for the Opet Festival went along the ceremonial road and on its outward journey, but always returned on the river Nile. The existence of these six way stations indicates that Hatshepsut had constructed an early, sacred road or at least embellished it.

There is evidence for a processional way lined with statuary to the South during the reign of Hatshepsut. A few of the existing sphinxes have been also attributed to Tuthmosis IV on stylistic grounds. However it was Amenhotep III, who first instituted the sphinx lined avenue between the 10th pylon of Karnak Temple and the precinct of Mut Temple and to the South of Khonsu temple at Karnak. Then the project was stopped during the reign of Akhnaten, but was continued by King Tutankhamun (Cabrol, 1995), (between the Xth pylon of Karnak and Mut temple) although the sphinxes have usurped, reworked and repositioned many times by later kings. These paved ways linked the various temples of Karnak with one another and with Luxor temple were its remained visible in ancient times. The present sphinxes avenue between Karnak and Luxor Temples dates back to the reign of Nectanebo I who inscribed various dedicatory texts on the bases of the sphinxes

says: *"I built a beautiful road for (my) father Amun bordered by walls, planted with trees and decorated with flowers. A road made by the king to his father Amun in order that he does a beautiful sailing to Ipt-resyt and more beautiful has ever existed before..."* (Abd El-Razeq, 1968).

### 3 The Discovery of the Sphinxes Avenue

The Sphinxes Avenue was first discovered in 1949 during excavations conducted by Zakaria Ghonaim in front of Luxor temple (Fig. 1). Subsequent excavations by Dr. Mohamed Abdelqadr and Mahmoud Abdelraziq between 1958 and 1964 (Abdul-qader, 1968) substantially increased the initial exposure, revealing the Avenue from Luxor temple to the rear of Luxor Polis station which was existed in front of Luxor temple in 1936. By the end of these excavations, a total of sixty-two sphinxes had been revealed, along with circular red-brick structures occurring between the sphinxes (interpreted as emplacements for planting trees), their associated irrigation channel, and a pavement made from sandstone slabs (Fig. 2).



**Fig. 1** Abdul Qader with the first sphinx



**Fig. 2** Abdul-Razeq excavations

Inscriptions were found running around the bases of the sphinxes recording Nectanebo's titles and epithets. On one he describes "*this magnificent avenue which was enclosed within walls, planted with trees, and made dazzling with flowers basins*". Of note, Dr Abdulqader recorded that the eastern row of the sphinxes was, without exception, destroyed, whereas the western row was found intact. Mohamed El-Saghir recorded a similar scenario to the northeast.

In addition to the excavations in front of Luxor temple, six soundings were dug along the course of the Avenue, both inside and outside the modern town. Between 1984 and 1991 under the direction of Mohame Al-Saghir, three more portions of the Avenue were revealed. These include, first, the area at the North end of Hod(basin) of Abualgud, The latter where twenty sphinxes were exposed, all badly damaged, along with the pavement (located 7.6 m from the sphinxes), flowers basins, and irrigation channels (El-Saghir, 1992). The second area is to the West of the Northwest corner of Mut temple. The latter excavations demonstrated that the Sphinxes Avenue which runs directly northwest from Luxor Temple does not connect, as was formerly believed, with the dromos of the Temple of Khonsu (Fig. .3), but reaches its North end at a point facing the northwest corner of the Mut Temple precinct. At this point it joins and East–West Avenue of Sphinxes also erected by Nectanebo I. Of the last area of the Avenue (i.e. The East–West), the



**Fig. 3** Sector of the Avenue



**Fig. 4** The excavations in front of Luxor temple



eastern part connects with the main entrance of the Mut precinct, where it branches South for a short distance to the temple of Mut and northward for a greater distance to the Tenth Gate of Karnak temple. Along this East–West axis, the Avenue was bounded by mud-brick walls on either side.

## 4 Recent Excavations

Before we began the work in the Sphinxes Avenue, the whole road was divided to different sectors according to the occupations covered it (Fig. 4). The excavations began in 2005 until 2013 under the supervision of the author. The excavations aimed to open the whole course of this great processional road between Luxor and Karnak temples, (Boraik, 2008) and proceeded as following.

### 4.1 Sector I (in Front of Luxor Temple)

This sector comprises the area of Khaled ibn El-Waleed garden and the Avenue of Sphinxes from Luxor temple until the dismantled police station. The excavations started in this sector after completing the demolition of the police station and after mechanically removing the paved asphalt road between it and the mosque of Almeqashqesh. A trench excavations measuring 24 m × 2 m extended East–West



**Fig. 5** One of sphinxes as found



**Fig. 6** A head was used as filling during Roman time



**Fig. 7** The sector in front of Luxor after excavations

in the middle of the site about 20 m to the North of the mosque of Almeqashqesh. This was dug during my work in the salvation of Karnak and Luxor Temples dewatering project in 2003. Here was found a sphinx on the western side of the area, with red brick circular planters and pavement, but there were no traces for the eastern row (Fig. 5).



**Fig. 8** The second sector during the excavations

Two long NE–SW trenches were dug which exposed the western and southern row of the sphinxes associated with red brick tree pit. The North-eastern row is severely damaged, while the South-western one is relatively better preserved, with some sphinxes broken in pieces.

Many Roman structures were found, indicating that the site was used during the Roman period for different activities. A sandstone block found inside one of the walls in front of the western row of the sphinxes was inscribed with the name of Cleopatra VII. Two red brick walls running parallel to each other, oriented SE–NW, occurred at a level lower than the sphinxes and dated back to pre-Nectanebo times in the late period. (Boraik, 2010a, b) Also we found that the western row is in a good condition of preservation and three sphinxes were used as a peddling for some of the Roman structures (Fig. 6). Two royal heads of the sphinxes also were used as a filling in the walls of these Roman structures (Fig. 7).

Most of the stone pavement in the middle of the road has been found in a good condition and a big slab has the name of king Thutmosis the fourth from the New Kingdom was used in the construction of the pavement. The total number of sphinxes and pedestal, from Luxor temple to the end of this sector (including what Abd el-Qader and Abd el-Raiq found) is now 130 pedestals, 65 on each row and 90 sphinxes of Nectanbo I with dedication texts and cartouches inscribed in sunken relief on their bases (Fig. 8).





**Fig. 9** One of the heads of the ram head sphinxes



**Fig. 10** Menkherperre Chaple



**Fig. 11** The wine cistern



**Fig. 12** Wine installation

#### ***4.2 Sector II, (from Police Station to El-Adra Church)***

This sector was occupied by the building of the court and other government structures. The excavations revealed that this sector was completely damaged. Some sphinxes were found in pieces and three intact heads of sphinxes. Also remains of red brick circular structures for plantation were found (Fig. 9).

**Fig. 13** The Stela

### ***4.3 Sector III, (from El-Adra Church to El-Mathan Street)***

This sector covers a distance of 250 m. Houses utilizing a septic tank swage system occupied this area. Most likely, this system has contributed to the observed damage of the avenue. Our excavations in 2009 revealed that the road was badly damaged and that the slabs stones of the pavement do not exist anymore. However, the bedding sand was found, with a thickness of 40 cm. Remains of 79 sphinxes were unearthed, 39 in the eastern row of the avenue and 40 in the western row. In the eastern row, only the lower parts of the pedestals have survived. Two royal sphinxes heads were uncovered in poor condition (Fig. 10). Between the pedestals the remains of circular red brick tree pits were unearthed. We discovered that at the time of Nectanebo I some inscribed blocks and some parts of the columns were reused in the construction of the pedestals. The most important discoveries were the remains of a chapel that was built by Menkheperre, a high priest of God Amun Re during the 21th dynasty (1080–931 B.C.). This chapel is located to the North of this



sector, 15 m to the eastern row of the avenue. Some red bricks bearing the name of Menkheperre also uncovered in this chapel with remains of two columns (Fig. 11).

This indicates that the chapel had already existed before and has usurped during that time. Under the reign of Necktanbo I, the chapel has been dismantled and the stones of the columns were reused in the construction of the sphinxes pedestals. In 1993, M. El Saghier had found another chapel of this high priest in the area of Abu El-Goud, 75 m east of the Sphinxes Avenue.

The excavations brought to light also that this area was used as an industrial area during the Roman period. A series red brick walls extended from the South to the North just behind the sphinx pedestals. A wine installation was found on the West row of the sphinxes dating back to the Roman period and, most likely, was in use through the Byzantine period (Fig. 12). The winery extends 19.5 m South–North and 24 m East–West. Its eastern façade is 1.60 m high. The preliminary study of the pottery indicates that this winery was used until the 3rd Century A.D. A sandstone block measuring  $120 \times 70$  cm has circular holes with two crosses (most likely Coptic) carved next to them. In the walls of the building next to the winery, remains of a royal stela were found which possibly dated into the end of the Pharaonic periods. It measures  $50 \times 40$  cm and portrays a king kneeling in front of god Amun-Re and offering the NW bowls (Fig. 13).



**Fig. 14** Portion of the Avenue Sector IV

#### **4.4 Sector IV (*Behind Luxor Library*)**

The site is located 750 M to NE of Luxor Temple and is bounded to the NE by Airport road and to the SE by El-mathan street, to the SW by Sharya El-karnak and to the east by Abu al-Goud village. The site extended for 653 m  $\times$  76 m wide and is named after Luxor Library; it was occupied by agriculture which didn't effect on the preservation of the avenue and also gave us an idea about the stratigraphy of the



**Fig. 15** Cistern



site. About 172 sphinxes with their pedestals were uncovered. Most of them were found destroyed and headless. Parts of the pavement made of sandstone slabs have been revealed with circular red brick planters connected with irrigation channels were also found. 89 sphinxes of the western row were found partially preserved in good condition and 83 in the eastern one, mostly destroyed; their heads were cut off and many of them found next to their bodies except two which were found intact. This portion of the Sphinxes Avenue was also built by Nectanebo I, but no inscriptions on the bases of the sphinxes was found. The excavations of this sector revealed that it was used widely during the Roman periods. And show that this portion of the Avenue was used for industrial activities during that period (Fig. 14).

The pavement: most of the pavement was carried away and does not exist anymore. The excavations revealed that Nectanebo I constructed a 40 cm thick bedding of pure sand before installing the slabs of the pavement.

Two remaining parts of the pavement were uncovered. The first was towards the north, next to the Airport road; the second part is to the South of the first and was damaged by an important flood episode: the slabs are slightly isolated and silts were deposited between. The excavations revealed that this sector was truncated by three factors: First, during the late Roman time, the bodies of the sphinxes were used as bedding in some structures and later this area was turned into an industrial area. Second, at that time a large flood event covered and destroyed part of the site and left behind a thick layer of clayish silt and silty clay raised about 1.2 m above the sphinxes. Third, during the medieval period the sandstone blocks and fragments of the avenue were largely carried away, especially the pedestals. This explains the fact that many sphinxes were thrown off their pedestals. As mentioned above, this sector, was used in the late Roman period for industrial purposes. Wine installations with their related structures as pottery kilns, galleries for labors, were found. It



**Fig. 16** Wine presses



**Fig. 17** Sector V after excavations

seems also that the area to the east of the site was for vineyards. The wine installation Among the many important remains of the Roman period structures that have come to light in this portion is the wine factory. It is located to the West of the western row, behind the sphinxes No. 21–24 and consisting of three main elements:

- 1 Portico for sorting the grapes. A pillared portico is located to the north of the presses. Made of badly destroyed red bricks, it was probably used for the first step of the process (Fig. 15).
- 2 Presses. The complex located to the South of the portico measures about  $14 \times 13.5$  m. This wine press has a subsidiary basin for washing the grapes. The press itself was made of red bricks in a rectangular shape with a mosaic floor. It contains two squared basins. The first one lies to the North–West and measures  $2.6 \text{ m} \times 2.46 \text{ m} \times 1 \text{ m}$  deep.
- 3 Storage cistern. This is located to the South–West of the press behind sphinx no. 27 and 28 of the western row of this sector (Fig. 16).

The laborers galleries: the complex measures  $38.5 \text{ m North} \times 9.65 \text{ m West}$  and was constructed on the same level of the pedestals of the sphinxes. These galleries are located to the South of the cistern to the West of sphinxes no. 36–43 of the western row of the avenue. They were used mostly during the harvest season as a temporary residence. Among the important discoveries during the excavations of this sector are: A stela of Bakenkhonsu, the high priest of Amun-Re was found



**Fig. 18** Connection to Mut temple and Nile River

during the first cleaning of the upper phase of the site and at a depth about 50 cm from the surface level, behind sphinxes no. 48–49 (Fig. 17). It has 17 horizontal lines of text and measures 132 cm height  $\times$  77 cm in width  $\times$  28 cm thickness. It is dated to the 4th regnal year, the, highest attested date, of Setnakht, the first king of the 20th dynasty. Of particular interest in the main text is the theme of the discovery of damage of an ancestral and divine monument as a symbol of the effects of disorder, this followed by the reversal of such effects by restoring the monument and a dedication offering by Bakenkhonsu (Boraik, 2007a, b). And also a rounded-top private stela in sand stone in sunken relief was also found. It bears the representation of a man standing in front of God Amun and his wife Goddess Mut. The stela may



**Fig. 19** The water well with its staircase



dates back to the New Kingdom. Another two fragments of a sand stone stela of Emperor Tiberius were unearthed to the east row of the sphinxes. The stela is decorated with figures and remains of text in sunken relief. Topped by a winged sun disk, the lunette depicts the emperor offering the nu-bowls of the wine to the traid of Karnak, Amun-Ra, Mut and Khonsu before whom a second figure of Khonsu the child is standing; before the king. During the excavations of this sector we found a thick layer of ceramic remains containing some complete jars of different shapes and sizes, as well as oil lamps, some melted by high fire. This indicates that these wares and vessels were placed as bedding for next constructed kiln. Initial investigation dates them back to the 3rd century A.D. (Boraik, [2010a](#), [b](#)).

#### 4.5 *Sector V*

This sector is called Shaikh Moussa Bridge, named after the bridge that existed over the ditch of Chevrier. This site covers a surface of 474 m in length and 54 m in width. It extends from the Airport road towards the North of the avenue that leads to Mut temple. In 1992, El Saghier discovered in this site the remains of twenty deteriorated sphinxes, fourteen on the western and of six on the eastern row. These



**Fig. 20** The platform of the flads holder



**Fig. 21** The old retaining wall

were badly damaged and had completely lost their inscriptions. Along with the sphinxes, remains of tree pits and irrigation pipes of ribbed ceramic were unearthed. On this site as also in the previously described sectors I and IV the sphinxes are placed on an average distance of 6.60 m from the edge of the paved way (in sector II the pavement was missing). In sector V the western row of the sphinxes had been built over by private houses, two mosques, and an asphalt road in front. Our excavations in this sector started in January 2010. We discovered 28 new sphinxes on the western and 7 on the eastern row (Fig. 18). Together with earlier findings by M. El Saghier, a total of 168 sphinxes were excavated in this area. The stone pavement was found in a good state of preservation but erosion is particularly visible on the upper and middle part on its surface. It is assumed that in this section the pavement experienced long periods under Nile water. Most likely, this area was like a lagoon before the construction of the High Dam at Aswan. Our excavations revealed that the avenue extends 320 m to the North at the same level. Thereafter, the Avenue of Sphinxes was built in ancient times at a slightly higher (60 cm) level than the parts before. Under the reign of Nectanebo I a ramp was built to connect



the two different levels. The road continued on this higher level until the turnoff to Mut Temple and on this part of the road for another 50 m (Fig. 19). Some of the sphinxes were found in fragments and then restored. The first three sphinxes on the western row from the road to Mut temple have inscriptions with the titles and the cartouches of Nectanebo I. Furthermore, six royal heads were unearthed on the eastern row next to their pedestals. Approximately 15 m behind the sphinxes, a cylindrical well was found built of sandstone blocks.

This well which may have functioned as a Nilometer has a diameter of 5.5 m at its top and a flight of stairs measuring  $110 \times 25$  cm, with an average thickness of 15 cm, was leading down to the water (Fig. 20). We tried to clear the well inside.

However, the work had to be stopped after one meter when we reached the ground water level. So far, many pottery vessels were uncovered some dating back to the late Pharaonic period but the majority were attributed to the Roman period. East of the eastern row of the sphinxes, we unearthed a platform made of mud bricks. The platform which faces the area where we found the well has as a special feature a line of sandstone slabs with holes on the top. Behind each of these holes another corresponding one was discovered in the ground.

This construction might have been a type of flagpole holder, made to support wooden beams that were held by ropes and tied to the holes. Perhaps, this platform may have been used to announce the beginning of the Opet festival after the level of the inundation was measured in the well (Fig. 21). Approximately 200 m from the



**Fig. 22** The embankment of the Sphinx Alley

East and West of the sphinxes previously cleared, whitewashed mud brick walls were found. These walls were built during the reign of Nectanebo I, most likely as a barrier for the road. A section of sandstone lintel was uncovered to the East of the avenue, measuring 0.95 m  $\times$  0.44 m and 0.14 m thick. The lintel has linear vertical inscriptions carved in sunken relief. The owner of this lintel is portrayed in position of adoration, kneeling towards the names of Amun-Re, Re-Horakhty, and cartouches of Ramses VI. Another sandstone block was found that was reused for the construction of the pavement. It bears a large scene in raised relief of a standing king dressed with the royal kilt which was decorated with cobras crowned with sun-disks. The king holds in his right hand a long bouquet of flowers. This may have been a representation of Amenhotep III in his later deification style (Boraik, 2013).

To the northwest end of this avenue we found the remains of a Roman structure. Certain blocks that were reemployed in its construction are inscribed with the cartouches of the God's wife Shapenupet in sunken and bas-relief. 7 some fragments show scenes of the God's wife with Amun-Re, others show inscriptions together with representations of the god Hapy.

Another block which was found in this building shows an inscription in slight sunken relief mentioning the fourth prophet of Amun, Montuemhat from the 25th dynasty.

Many pottery jars and vessels from the Roman Period were unearthed as well as an oil press made of black granite. At the end of this sector, where the avenue turns off to Mut temple, we excavated the road in the opposite direction towards the Nile. The excavations uncovered 50 m of this road and, to the North of it, a Ptolemaic settlement. Houses were built of mud brick next to the avenue after the Nile shifted towards the West and left behind a space for the people to settle in. Some limestone talatats from the reign of Akhenaton were unearthed in this area. One of the talatat blocks bears a carved fresco of cobras (Boraik, 2013).

## 4.6 Sector VI

The area of Sector VI that was cleared, was the western side of recumbent ram avenue in front of Khonsu temple. The eastern side of this sector could not be excavated since it is still occupied by modern private buildings, an asphalt road, and underground utilities.

On the western side of the area the excavations brought to light an extension of the embankment wall that was previously discovered in front of Karnak temple.

This indicates that the complex of Karnak was built on a peninsula and had been surrounded by a huge embankment that protected it from (the erosion of) the flood (Fig. 22).

The extension of the embankment in front of Khonsu temple was built with small carved blocks of sandstone and curved southwards towards the avenue (Boraik, 2010a, b).

The excavations showed that the recumbent rams in front of Khonsu temple may have been placed there during the Ptolemaic Period when the gate of Euergetes was constructed, as the embankment lies at a lower level than the bases of the sphinxes.

The embankment wall was not used as a quayside because it has no mooring loops, unlike the quay in the front of Karnak temple. The West row of rams was completely cleared and brought to light numerous pedestals bearing the name of Amenhotep III. Most of these were rebuilt back to front, and some were built with reused blocks dating back to the 25th Dynasty.

## 5 Conclusions

The excavations in different sectors of the Avenue of Sphinxes were carried out at the same time according to the master plan of the Ministry of State for Antiquities (MSA). The master plan aims to excavate, to restore, and to install a site-management program designed to integrate the Avenue of Sphinxes into Luxor City. Different campaigns funded by the MSA have been worked along the avenue. These excavations have brought to light lots of information about the history of East Luxor. This sacred road built by Nectanebo I was most likely used for the procession from Karnak to Luxor temple during Opet festival (for a summary about the Opet festival and the routes which were used see Darnell 10). The sacred road was in use until the end of the Roman period. During the Ptolemaic period many contributions in restorations and constructions in both Karnak and Luxor temple were achieved.

The city, called Diospolis Magna in Roman times 11, was divided into six districts and the processional route was still in use at least until the 3rd century (Bagnail and Rathbone, 2004). During the reign of Tiberius (14–37 A.D.). Luxor temple was damaged by a high inundation. Tiberius ordered the repair of the temple and the building of an embankment. Perhaps, Tiberius also ordered the digging of a canal to protect the temple in future. 12 Greek graffiti on the same pedestals testify the worshipping of Amun by pilgrims in Greco-Roman times and also their visit to the Avenue of Sphinxes.

Under Diocletian (284–305 A.D.) Thebes became a separate province with two legions. Luxor temple became the heart of the Roman military camp. 13 By that time the temple and the Avenue of Sphinxes were no longer in use. The Avenue of Sphinxes was disrupted from that time till modern times by many factors: During the Roman period and after closing the temple many of the Sphinxes were used in foundations and beddings of Roman structures. Many of their royal heads were used as fillings inside the walls. Several parts of the sacred road were used as an industrial area for different activities like wine installations, pottery kilns, and wine presses. During the late Roman period a high inundation event destroyed parts of

the Avenue of Sphinxes and leaving behind a thick layer of clayish silt. The silty clay raised above 1.2 m of the sphinxes. The site was used as a quarry during the medieval period. Especially, sandstone blocks and fragments of the Pedestals and the pavement from exposed parts of the avenue were largely carried away. Finally, the Avenue of Sphinxes has completely disappeared under farmland, modern houses, modern roads, governmental buildings and religious structures. Clearing and excavating the great processional way of Luxor has brought to light precious information that enriches our knowledge of Ancient Theban history. The work carried on also opens the opportunity of economic and cultural development in the area for years to come.

## 6 The Site Management

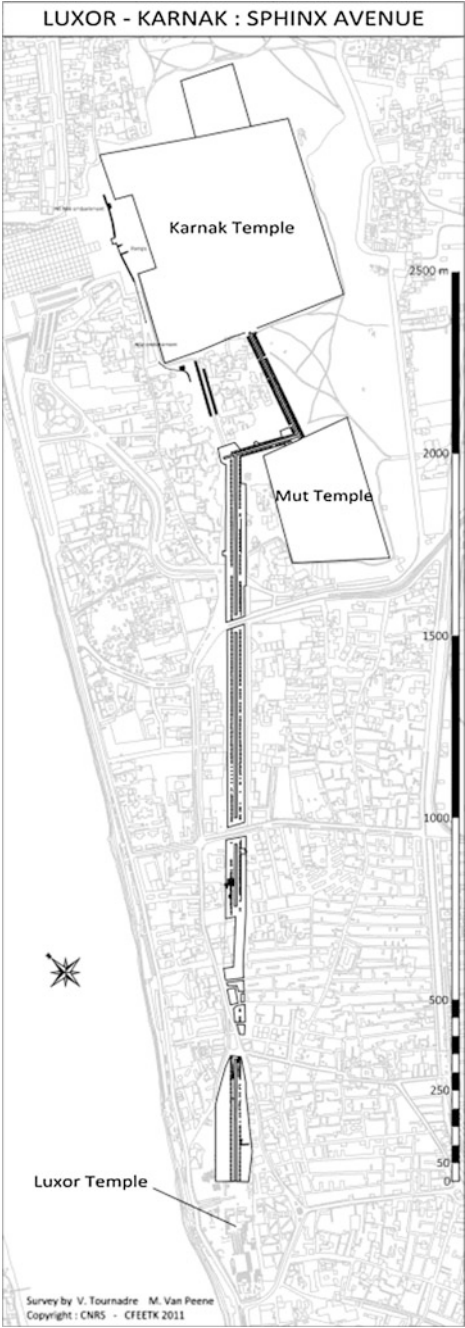
The excavations of Sphinxes Avenue were particularly complex as it included many underground cables, sewage and fresh water pipes that must be relocated. Also the uncovering of this sacred road divided the East part of Luxor city to two parts. Because the road lies in some sectors 4 m below the ground surface. This led to think about the protection of the avenue antiquities and also to integrate it with the city. Luxor Governorate was in charge of the construction of roads, infrastructure and plantation around the road under the supervision of the Antiquities Department.

First, a sandstone retaining slope wall was constructed on the both sides of the avenue (Fig. 23). After we finished the sector V behind the library, the vision was nor matched with the avenue. This concept turned the Sphinxes Avenue to look like a dry water canal. Secondly, with the idea of Antiquities Department, a concrete vertical wall was built along the both sides of the road and cased with mudbricks (Fig. 24). Also, every 600 m we constructed a ramps as visitor access to the road



**Fig. 23** The new retaining wall

**Fig. 24** Plan for the Sphinxes Avenue





and each ramp ends with control room. Behind each row of the sphinxes avenue, different trees were cultivated. Ancient trees were chosen to cultivated like, Sycamor, Henna, Acacia, Pomegranate, Tamarisk trees. Tow bridges are constructed crossing the road. Anew light system was installed to illuminate the sphinxes and the stone pavement. At the same time, work is ongoing focusing on restoration of the statues and conservation of the inscriptions. Also a new sandstone pavement was constructed in the areas where the ancient one is missed.

## References

- Abd El-Raziq, M. (1968). Study on Nectanbo 1st in Luxor temple and Karnak. *MDAIK*, 23, 157.
- Abdul-qader, M. (1968). Preliminary report on the excavations carried out in the temple of Luxor season 1958–1959 & 1959–1960. *ASAE*, 60, 227–279.
- Arnold, D. (2003a). *The encyclopedia of ancient Egyptian architecture*. Egypt: AUC Press.
- Arnold, D. (2003b). *Temples of the last Pharaohs* (pp 1ff). New York: Oxford University Press.
- Bagnail, R., Rathbone, D. (2004). *Egypt from Alexander to the early Christians* (pp. 186–189). California: Getty Publications.
- Blyth, E. (2006). *Karnak: Evolution of a temple* (pp. 1-ff). Routledge.
- Boraik, M. (2007a). *The excavations in front of Karnak temples*. Report 2007, unpublished report held in CFEETK archive.
- Boraik, M. (2007b). Stela of Bakenkhonsu, high priest of Amun-Re. *Memmonia* 18.
- Boraik, M. (2008). Decouverte de La grande gige protegant karnak des crues du Nil, in G. Zaki (dir), *Le Domaine D' Amon Re.40 ans de co.operation franco-egyptienne a Karnak* (2nd ed., pp. 76–83), Cairo.
- Boraik, M. (2010a). *Sphinxes avenue excavations* (pp. 45–78). First Report, CdK 13.
- Boraik, M. (2010b). *Excavations of the quays and the embankment in front of Karnak temples* (pp. 65–78). Preliminary Report, CdK 13.
- Boraik, M., & Thiers C. (eds). CFEETK activity report 2011. <http://www.cfeetk.cnrs.fer/index.php?page=Rapport-20>.
- Boraik, M. (2013). *The Sphinxes avenue excavations* (pp. 1332). Second Report, CdK 14.
- Boraik, M., Garaham, A., & Hunter, A. (2008). Stratigraphic landscape analysis: Charting the holocene movements of the Nile at Karnak through ancient Egyptian time, geoarchaeology. *An International Journal*, 23(3), 351–373.
- Boraik, M., & Ghilardi, M. (2011). Reconstructing the holocene depostional environments in the western part of ancient Karnak temples complex (Egypt): A geoarchaeological approach. *JAC*, 38, 3204–3216.
- Boraik, M., & Nagieb, M. (2013). *Ceramic material from the area of the Ptolemaic baths excavations in front of Karnak temples* (pp. 79–191). CdK 14.
- Cabrol, A. (1995). *Les Criosphinx de Karnak, un Nouvuax Dromos de Amenhotep III* (pp. 1–28). CdK X.
- Cabrol, A. (2001). *Les voies processionnelles de Thebes* (pp. 202–211), OLA94, Leuveu.
- Chevrier, H. (1928). Rapport sur les travaux de Karnak (1927–1928). *ASAE*, 28, 124.
- Chevrier, H. (1943). Rapport sur les travaux de Karnak (1938–1939). *ASAE*, 41, 553–570.
- Chevrier, H. (1947). Report sur les Travaux de Karnak. *ASAE*, 46, 147–161.
- El-Saghir, M. (1992). The great processional way at Thebes (the avenue of sphinxes at Luxor), in Sesto Congresso Interna-zionale di Egitologie, Ani 1, Turin, pp. 181–187.
- Garaham, A. (2011). Ancient Theban waterway. *JEA*, 38, 3.

- Ghilardi, M., Tristant, Y., & Boraik, M. (2012). Nile River evolution in Upper Egypt during the Holocene: Palaeoenvironmental implications for Pharaonic sites of Karnak and Coptos (pp. 7–22). *Geomorphologie I*, GFG, Paris.
- Gitton, M. (1974). Le Palais de Karnak. BIFAO74.
- Graham, A. (2007). Madrasa site—Auger (AS 31). Report 2007. Unpublished report held in the CFEETK archives.
- Graham, A. (2010). Ancient land scapes around Opet temple, Karnak. *JEA*, 36, 25–28.
- Graham, A. (2011). Ancient Theban waterways. *JEA* 38, 3.
- Graham, A., & Bunbary, J. (2005). The ancient landscapes and water scapes of Karnak. *JEA*, 27, 17–19.
- Graham, A., Masson, A., & Millet, M. (2009). Karnak land and waterscapes survey 2009. Season 2009. Unpublished report held in CFEETK archives.
- Legran, J. (1929). Les Temples de Karnak (pp. 3–27), Bruxelles.
- Millet, M., Masson, A. (2011). Karnak: Settlements. in W. Wendrich (ed.), *UCLA Encyclopedia of Egyptology*. Los Angeles. <http://scholarship.org/us/item/iq346284-page-1>.
- Nims, C. F. (1955). Places about Thebes, *JNES*, 14(2). Theban Temples, The University of Chicago Press, Oxford 1972.
- Redford, D. (2001). The encyclopedia of ancient Egypt (Vol. 3, p. 621). Cairo: AUC Press.
- Reeves, N. (2000) *Ancient Egypt the great discoveries* (pp. 1180120). UK: Thames & Hudson.
- Shaw, I. (2000). *The Oxford history of ancient Egypt* (pp. 30–31). New York: AUC Press.
- Shaw, I., Nicholson, P. (1996) *Dictionary of ancient Egypt* (p. 95). Cairo: AUC Press.
- Traunecher, C., & Golvin, J.-C. (1984). *Karnak, resurrection d'une site* (p. 24). Paris: Payot.
- Wagner, G. (1972). Inscriptions Grecques du dromos de Karnak. *BIFAO*, 161–179.
- Weeks, K. (2005). *Luxor* (pp. 34–50). Cairo: AUC Press.
- Wilkenson, R. (2000). *The complete temples of ancient Egypt* (pp. 94–95,171). New York: Thames & Hudson.
- Wilkenson, R. (2003). *The complete Gods and Goddess of ancient Egypt* (pp. 92–97). New York: Thames & Hudson.
- Zaki, G., & Boraik, M. (2009). L'avant-port de Thot qui reside a Thebes dans le quartier nord de Karnak. *BIFAO*, 109, 495–507.

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