World Heritage Scanned Nomination

File Name: 1130.pdf **UNESCO Region:** ASIA AND THE PACIFIC

SITE NAME: **Ashur (Qal'at Sherqat)**

DATE OF INSCRIPTION: 5th July 2003

STATE PARTY: IRAK

CRITERIA: C (iii)(iv)

DECISION OF THE WORLD HERITAGE COMMITTEE:
Excerpt from the Report of the 27th Session of the World Heritage Committee

Criterion iii: Founded in the 3rd millennium BCE, the most important role of Ashur was from the 14th to 9th century BCE when it was the first capital of the Assyrian empire. Ashur was also the religious capital of Assyrians, and the place for crowning and burial of its kings.

Criterion iv: The excavated remains of the public and residential buildings of Ashur provide an outstanding record of the evolution of building practice from the Sumerian and Akkadian period through the Assyrian empire, as well as including the short revival during the Parthian period.

BRIEF DESCRIPTIONS

The ancient city of Ashur is located on the Tigris River in northern Mesopotamia in a specific geo-ecological zone, at the borderline between rain-fed and irrigation agriculture. The city dates back to the 3rd millennium BC. From the 14th to the 9th centuries BC it was the first capital of the Assyrian Empire, a city-state and trading platform of international importance. It also served as the religious capital of the Assyrians, associated with the god Ashur. The city was destroyed by the Babylonians, but revived during the Parthian period in the 1st and 2nd centuries AD.

Inscription on the List of World Heritage in Danger: 2003
Threats to the Site:

Ashur (Qal'at Sherqat) was inscribed on the List of World Heritage in Danger at the 27th session of the World Heritage Committee simultaneously with its inscription on the World Heritage List. When the property was nominated before the conflict, a large dam project threatened the site, which would have been partially flooded by a reservoir. While the dam project has been suspended by the current administration, the Committee considered that its possible future construction, as well as the present lack of adequate protection, justified the inscription of the site on the List of World Heritage in Danger.

1.b State, Province or Region: Salah Addin Province

1.d Exact location: N35 28 00.0 E43 14 00.0

UNITED NATIONS
EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

WORLD HERITAGE LIST

NOMINATION FORM

Name of the property: ASHUR

State: Republic of Iraq

Date: September 2002

Revised version: 21st ,January 2003

1. Identification of the property	
a. Country	Republic of Iraq
b. State, Province or Region	Salah Addin Province
c. Name of property	Ashur (Qal'at Sherqat)
d. Location	43° 14' East, 35° 28' North 390 km north of Baghdad, 110 km south of Mosul The site is located on the western bank of the river Tigris south of the modern village of as-Sherqat.
e. Maps or plans indicating the boundary of area proposed for inscription and buffer zone	The site of Ashur is surrounded to the east by the Tigris, to the north by a plain with a *wadi* corresponding to a former branch of the Tigris and to the west and south by hilly landscapes (see attached maps 1-3). 1. Map of Ashur indicating the boundary of the area: Finkbeiner and Pongratz-Leisten 1992. 2. Map of Ashur and its immediate surroundings: Andrae 1938 (Beilage) 3. Area map: Atlas of archaeological sites in Iraq (1970) 4. Historical map of Assyria in the 1st millennium Kessler, 1987
f. Area of property proposed for inscription and buffer zone	The area of the entire archaeological site of Ashur (70 ha) including temples, three *ziggurat*s, palaces, graves and private houses etc. within the city walls as well as the area of the New Year's festival building to the north-west. In addition, a 100 ha buffer zone has been defined 500 m from the western and southern boundaries of the archaeological site. The road to the village of Sherqat will go across the buffer zone. The areas north and east of Ashur will be flooded in 2006 by the Makhool Lake.
2. Justification for inscription	
a. Statement of significance	The city of Ashur is the first capital of the Assyrian empire and the religious centre of Assyria, the core of which is located between Ashur, Nineveh and Erbil (see map). The singular settlement was founded in a specific geo-ecological zone, i.e. at the borderline between rain-fed and irrigation agriculture, at the intersection between nomadic and sedentary subsistence strategies. Chronologically, the site was occupied as early as the Sumerian Early Dynastic period (2,800 B.C.). It continued until the Hellenistic period and the time of the Arabian kings of the Hatrian dynasty in the first century B.C. and the Parthian period in the first and second centuries A.D., thus covering three millennia of ancient Middle Eastern civilisation. The city gained its reputation because it was the city of the god Ashur, the national deity of the Assyrians. Before the Assyrians, that is since the first half of the 3rd millennium, the existence of substantial cultic buildings is attested. This means, that the site was already a developed and organised urban system, the only one of

	this size known in the entire area. During the Old Assyrian period (19^{th}-16^{th} cent. B.C.), Ashur was a city-state and trading platform of international importance. It played a key role as the centre of political power for the foundation of the Assyrian empire in the Middle Assyrian period (14^{th}-11^{th} cent. B.C.) and for Assyrian art and craftsmanship. Although during the Neo-Assyrian period (10^{th}-7^{th} cent. B.C.), the political centres of the empire were transferred to Nimrud, Dur-Sharrukin and Nineveh, Ashur maintained its importance as the main cultic site of Assyria. It was also the place where the Assyrian kings were crowned and buried. As one of the few archaeological multi-period sites in Assyria of its kind, remains of the buildings and their furnishing have been extensively excavated. The architectural and artistic record is accompanied by a large corpus of cuneiform texts which attest a leading role of Ashur in religion and scholarship, especially during the Middle- and Neo-Assyrian periods.
b. Comparative analysis	In terms of historical importance and cultural impact, the city of Ashur can be compared with great ancient capitals in the world such as Babylon, Ur, Athens, Rome, Thebes and other cities that have influenced the history of humankind. Within the framework of the other three Assyrian capitals (Nimrud, Dur-Sharrukin and Nineveh) Ashur is the only and unique example of an urban site where continuity and change of the Assyrian civilisation pertaining to religious, public and domestic architecture, artistic production, urban planning, religious and political systems, economic subsistence and social patterns is revealed by the archaeological and textual evidence throughout the recorded archaeological periods.
c. Authenticity	The site of Ashur had been abandoned at the end of the Parthian period (2^{nd} cent. B.C.), and, contrary to many other sites in the region, there was no further occupation. Therefore, the authenticity of the remains is unquestionable. There are two major structures built in the 19^{th} and 20^{th} centuries A.D., Ottoman military barracks at the north-eastern edge of the site, used until 1991 as the site museum, and the excavation house, erected by the German expedition and restored by the State Board of Antiquities. There are also two small guard's houses on the site. As for restoration works, traditional techniques and materials (mud-bricks and plaster) have been applied in the 1980s for partial reconstruction of the Old Palace, the temple of Anu and Adad and parts of the city wall, based on the excavated evidence. The walls stand up to a height of c. 2 m. Baked bricks have been used for the Tabira gate, the temple of Ishtar and parts of the Parthian palace. Gypsum and as little concrete as possible served as mortars.
d. Criteria under which inscription is proposed	The inscription of Ashur is proposed under cultural criteria (iii) and (iv).

Criterion C (iii)

Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

During its history of three millennia, the most important step at Ashur was certainly the establishment of the Assyrian civilisation. The strong tradition in the material, religious and intellectual culture of Assyria remains connected to the site and its region. As to the space use and urban layout, most significant is the concentration of public buildings at the periphery of the city, the development of the specific Assyrian temple ground-plan and of the palatial architecture, its decoration, monumental art and furnishing. These elements became the standards for the other urban and provincial centres during the Middle and Neo-Assyrian periods, that is for a time span of more than seven centuries. At Ashur, the early steps towards a systematic shaping of Assyrian cities could be observed for the first time within the limits of an extremely restricted space and a grown urban system, this in contrast to all the later Assyrian capitals.
The tight and complex cultural identity is expressed by the fact that the land, the god and the city bore the same name: Ashur. It is clear that, already during pre-Assyrian periods, the site played an important role in the land of Subartu, since it was a desired place for foreign control over the region during the Akkade and Ur III periods (last quarter of the 3rd millennium B.C.).

Criterion C (iv)

Be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

Ashur has an outstanding density of excavated architectural remains from different parts of the Assyrian periods without comparison. The ensemble of public buildings (temples, palaces, city walls) finds its counterpart in several areas of domestic architecture. As for the religious architecture, the presence of three *ziggurat*s erected of mud bricks and two double temples should be mentioned as well as the temple of the national god Ashur. Of them, the impressive ziggurrat of the god Ashur is still standing today and is a visible landmark. Whereas these buildings embody the Assyrian architectural tradition, the temple of Ishtar alone features a different building tradition (bent axis), which has its origin possibly in the area southeast of Assyria. At two places a sequence of royal palaces was observed, one of them saved later as burial place for Assyrian kings.

3. Description

a. Description of property	The settlement of Ashur was founded on the western bank of river Tigris, on uneven bedrock; within its walls it covers the area of about 65 ha. The excavated remains consist of numerous superimposed stratigraphic levels of archaeological deposits. The earliest of them date to the Sumerian Early Dynastic period of the early 3rd millennium B.C. After the Akkadian and Ur III periods which are present at some points, follow the Old, Middle and Neo- Assyrian periods, the latter one ending at the mid-first millennium B.C. Finally, Hellenistic remains and those of the Arab Hatrian kings are attested. Structurally, the city of Ashur was divided in two parts, the old city (Akkadian *libbi-ali*, the heart of the city), which is the northern and largest part of Ashur, and the new city (Akk. *alu-ishshu*), a smaller southern projection in the city, which was constructed during the mid-second millennium B.C. The major features of the city which are presently visible on-site consist of architectural remains (some of them partly restored): the *ziggurrat* and the great temple of the god Ashur, the double-temple of Anu and Adad (with the remains of two smaller *ziggurrat*s), the temple of Ishtar, the Sumerian goddess of love and war, the Old Palace with its royal tombs and several living quarters in many parts of the city. Some parts of the Parthian palace are visible at the border between old and new city. The double-temple of Sin and Shamash has almost disappeared. The same is valid for the Assyrian New Year's festival building (*bit akitu*), which is located outside the walls of the city. Living quarters with indoor-burials and a palace area in the northern centre of the city are being excavated. The city was surrounded by a double wall with several gates (the new city just by a single wall) and a big moat. The majority of the buildings of the city were built with sun-dried mud-bricks with foundation of quarry stones or dressed stone, depending on the period. Artistic objects and parts of architectural remains of the city are at present on display in the major museums of the world, in the Louvre, the British Museum, the Pergamon Museum in Berlin and the Metropolitan Museum in New York, as well as in other museums. The surface of the site is partly covered by the excavation debris from several generations of archaeological excavations.
b. History	The history of the city of Ashur goes back to the Sumerian Early Dynastic period (first half of the third millennium B.C.). Some remains may even date to preceding periods. For this early part the stratigraphic excavation of the temple of Ishtar provided substantial information about the development of the religious architecture. Two of the five major building stages of it belong to this period. During the Akkadian empire (c. 2334-2154 B.C.) Ashur was an important centre, and a governor of the third dynasty of Ur (2112-2004 B.C.) ruled over the city which had to pay taxes to the central administration in the south. Still, the temple of Ishtar and its findings remains the main archaeological reference point. As an independent city-state Ashur became capital of Assyria and

	the Assyrians during the 2nd millennium B.C. starting with the Old-Assyrian rulers Erishum, Ilushuma and Shamshi-Adad I and thereafter with the Middle-Assyrian kings Eriba-Adad I. and Ashuruballit I. From here, the military campaigns of the Middle-Assyrian kings Tukulti-Ninurta I. and Tiglathpileser I. started which layed the foundation for the territorial expansion of the Assyrian empire to the west, i.e. Syro-Mesopotamia and the Levant, and other adjacent regions. For the 2nd millennium B.C. a systematic building programme is attested for Ashur which hardly finds a comparison elsewhere. It culminates in the Middle-Assyrian period, when king Tukulti-Ninurta I not only renovated or reconstructed the majority of the temples (among them the temple of Ishtar), but terraced a large area for the his New Palace (the building was not erected since the king founded a new residential city named Kar-Tukulti-Ninurta, further upstream). Ashur remained political capital until the reign of the Neo-Assyrian king Ashurnasirpal II (883-859 B.C.), who moved it to Kalhu (modern Nimrud). Nevertheless, Ashur continued to be an important religious and provincial Assyrian centre even though it had lost its function as national capital. The Neo-Assyrian kings executed restoration work at the main sanctuaries and palaces of Ashur as it was requested by the inscriptions of their predecessors and erected the royal burial place within the area of the Old royal palace. The majority of the private houses and living quarters date to this Neo-Assyrian period and provide important information about domestic architecture and the conditions of life of those parts of the Assyrian society not belonging to the royal élite. Special attention was received by the more than 1,000 inhumations in graves and tombs, mainly located inside the buildings, which provide important information on aspects of burial rites and funerary culture. The site survived the fall of the Assyrian empire, and it flourished in the Hellenistic and Parthian periods until sometimes before the third century A.D. The Parthian palace and a temple close to the *ziggurrat* are architectural testimonies of this period. Presently, residential areas of the Parthian period are being excavated.
c. Form and date of most recent records of property.	Excavation reports of the Iraqi and German Archaeological Excavations in the city of Ashur in the years 2000-2001 (copies attached). Monthly and annual reports to the State Board of Antiquities submitted by the local archaeological teams (see 6.a). (Attached)
d. Present state of conservation.	After the end of the German excavations in 1914, a good number of the buildings of the city of Ashur suffered from being exposed to erosion by rain and winds and normal natural destruction, since the excavated remains have not been covered or protected. In the late seventies of the 20th century A.D., the State Board of Antiquities and Heritage started a scientific programme in order to resume work in the city by archaeological excavations and some restoration to keep and strengthen what had been exposed. This is at the city wall (NW), the Tabira-Gate, some private houses, the temple of Anu and Adad, the Old Palace and the royal burial

	ground, the Parthian palace (indicated on the attached map). Contemporaneously, explanatory signs for the most important monuments had been set up (they have been removed after 1991). However, since the restored and partly reconstructed buildings and walls are equally exposed to erosion, they need continuous care. The construction of the Makhool Dam and, consequently, the threat by waters of the reservoir require protection measures for the entire site of Ashur (see below). Latest pictures of the city are attached as photographs and slides.
4. Management	
a. Ownership	Since October 17th 1935, the site of Ashur was declared property of the State of Iraq (Official Gazette No. 1465), and on the List of National Heritage. Since then, it is been taken care of by the State Board of Antiquities and Heritage (then Directorate General of Antiquities).
b. Legal status	The city of Ashur is the property of the State of Iraq, and it is taken care of by the staff of the State Board of Antiquities and Heritage, within the Ministry of Culture. It has been protected under the 1937 Law of Antiquities and its further amendments, and is now protected, as well as its buffer zone, under the recently adopted Law of Antiquities and Heritage No 55, dated October 2002 (attached).
c. Protection measures and means of implementing them.	The archaeological site of Ashur is under protection of the inspector of Antiquities in the province of Salah Addin. Excavations are conducted by the Department of Excavations and Archaeological Investigation in the State Board of Antiquities and Heritage, Ministry of Culture. There is no restoration work presently carried out. By the presence of an excavation team, the site is protected directly. The site is furthermore protected by 10 guards with night and day shifts.
d. Agencies with management authority	Department of Excavations and Archaeological Investigation in the State Board of Antiquities and Heritage, Ministry of Culture.
e. Level at which management is exercised and name and address of responsible person for contact purposes (see also 4j)	General management and supervision of the site: Dr. Jaber Khalil Ibrahim Chairman of the State Board of Antiquities and Heritage P.O Box 8056, Baghdad – Iraq Telephone: 00964-1-5378732 E-Mail: turath@uruklink.net Director General of the Department of Excavations and Archaeological Investigation Ms. Dr. Hana' Abd el-KHaliq, Baghdad Inspector of Antiquities of the province Salah Addin: Saud Faisal Azzawi

	Director of the Iraqi Archaeological expedition to Ashur: Dr. Riadh al-Doori, Baghdad
f. Agreed plans related to property	*Archaeological excavations* 1. Continued excavation by teams of the Iraqi expedition in the northern part of the city (palace area and living quarters). 2. Continued excavation by the German expedition from the University of Heidelberg in the northern part of the city (living quarters, palace and temple areas). 3. Continued salvage excavations in the southern parts of the city by teams of the Iraqi expedition. *Restoration and conservation* In view of the present situation and in continuation of the work which begun in the late 70s, it is planned to develop a detailed restoration and conservation programme for the site and its monuments. *Protective measures* Evaluation of the feasibility of constructing a retaining wall to protect the city from the future Makhool Dam reservoir and of its impact on the archaeological strategy and conservation/restoration measures. *Tourist facilities* The preparation of tourist facilities is in the process of planning and discussion. The following main issues will be a part of the plan: the establishment of an archaeological park of Ashur with pathways, explanation signs and printed information (see attached documents), the location of a shop and/or the location of a rest-house with toilets for visitors.
g. Sources and levels of finance	Annual financing from the central budget of the State Board of Antiquities and Heritage, Government of Iraq, as for the excavations by the Iraqi expedition. For the year 2002: ID 100.000.000 For restoration and conservation facilities and training measures there is presently no budget. The Deutsche Forschungsgemeinschaft as for the excavations by the German expedition. For the year 2003: EUR ___.___
h. Sources of expertise and training in conservation and management techniques	The Local field director in cooperation with the State Board of Antiquities and Heritage in Baghdad, in particular the Departments of Excavation and Investigation and the Department of Research and Studies. Trained students (B.A. and M.A.) from the Department of Archaeology, University of Baghdad and University of Mosul who will work in the State Board of Antiquities and Heritage later on. Trained staff from the State Board of Antiquities and Heritage, Baghdad. Architects and Civil Engineers, and skilled Craftsmen.

i. Visitor facilities and statistics	A guard's house with a guest book is located along the main route leading to the city inside the wall. At average, there are around 1,000 visitors a year (tourists and scholars). (i) Two flyers containing information on the history and the most important remains of Ashur can be obtained on-site (see attached document). (ii) Until 1991 the site-museum was located in the Ottoman military-barracks. (iii) Overnight accommodation: not available on-site. (iv) Restaurant or refreshment facilities: not available on-site (several small sandwich restaurants can be found in the village of as-Sherqat north of the site). (v) shops: not available on-site. (vi) car parking: an organized car/bus parking system has not been developed. Paths paved with gravel within the city are used by cars. (vii) lavatories: not available on-site. The large expedition house is at present closed to the public. (viii) search and rescue: If needed will be done by the available personnel.
j. Property management plan and statement of objectives	See attached document.
k. Staffing level	1 local project manager: PhD in archaeology 6 assistants: B.A. in archaeology. 1 architect. 1 civil engineer. 1 surveying engineer. Draftsmen, Photographer.
5. Factors affecting the property	
a. Development pressure.	The construction of the Makhool Dam and the filling of the reservoir in the year 2006 will severely damage the site by flooding and by infiltration. Therefore, effective measures will have to be developed in order to protect the site. Depending on the choice of the specific protection method, the overall strategy for archaeological excavations, as well as the ones for restoration and conservation measures to be undertaken at the site will be directly affected. So far, the construction of a retaining wall has been discussed, though a definite decision has not been made. A probable solution may consist of a retaining system on the site itself which would forever destroy the northern and eastern margins of Ashur. The study of the local geomorphological conditions, the evaluation of costs and construction planning will be finished in early 2003. Since the flooding of the Makhool Dam reservoir is expected for the year 2006, any construction work is scheduled to start not after the end of the year 2004. Whether there will be a retaining system or not, the development of an overall emergency action plan for Ashur is recognised as

	extremely urgent.
b. Environmental pressure	A direct and severe environmental danger from the area is not expected. However, the normal weathering effect of wind and rain erosion can be attested.
c. Natural disasters and preparedness	-/-
d. Visitors, tourism pressure	Presently very little (see under 4.i.). The planned guiding system for visitors is aimed at avoiding tourists from entering old or new excavation trenches and unprotected monuments of the site.
e. Number of inhabitants within property and buffer zone.	[there are possibly some houses in the buffer zone in as-Shergat NW]
6. Monitoring	
a. Key indicators for measuring state of conservation	Daily inspection of the property by the resident staff on the site and monthly reports for the centre (State Board of Antiquities and Heritage).
b. Administrative arrangements for monitoring property.	Daily inspection of the property by the resident staff and guards on the site, and monthly reports for the centre (State Board of Antiquities and Heritage). Excluding any urgent situation.
c. Results of previous reporting exercise.	Immediate actions for protection, restoration, and safeguarding the property.
7. Documents	
a. Photographs, slides and video	Photographs, a set of slides and a film on CD-Audio have been provided.
b. Copies of property management plans and extract of other plans relevant to the property.	See attached documents.
c. Bibliography	*General* E. Unger, Assur. Reallexikon der Assyriologie Vol. I, Berlin 1928: 170 ff. W. Andrae, Das Wiedererstandene Assur. Lepizig 1938 (2nd edition Munich 1977, ed. B. Hrouda; for an extensive bibliography cf. pp. 315-320). R.W. Lamprichs, Assur, The Oxford Encyclopaedia of Archaeology in the Near East, New York 1997: 225-228. *Monographic Excavation reports and studies (1903-14)* Several of the books mentioned below are translated into Arabic for the use of the Iraqi archaeologists during their work in the city of Ashur.

W. Andrae, Der Anu-Adad Tempel, Leipzig 1909.
W. Andrae, Die Festungswerke von Assur, Leipzig 1913.
W. Andrae, Die Stelenreihen in Assur, Leipzig 1913.
W. Andrae, Die archaischen Ischtar-Tempel in Assur, Leipzig 1922.
W. Andrae, Farbige Keramik aus Assur, Berlin 1923.
W. Andrae, H. Lenzen, Die Partherstadt Assur, Leipzig 1933.
W. Andrae, Die jüngeren Ischtar-Tempel von Assur, Leipzig 1935.
A. Haller, Die Gräber und Grüfte von Assur, Berlin 1954.
C. Preusser, Die Wohnhäuser von Assur, Berlin 1954.
A. Haller, Die Heiligtümer des Gottes Assur und der Sin-Samas-Tempel in Assur, Berlin 1955.
C. Preusser, Die Paläste von Assur, Berlin 1955.
P.A. Miglus, Das Wohngebiet von Assur. Stratigraphie und Architektur, Berlin 1996.
Excavation reports
H. Bashir, The pottery found at the Western Gate at Ahsur, Sumer 35 (1979) 342-343.
F.A. Ahmad, Excavation of Tabira (Kurkuri) Gate and the finds there in the second season, Sumer 42 (1986) 124-126.
M.A. Jeris, Upper layers at the crown prince's palace, Sumer 42 (1986) 116-121.
A.M. Jero, The tombs discovered in Ashur in the second season (1979), Sumer 42 (1986) 110-113.
R. Dittmann, Ausgrabungen der FU Berlin in Assur und Kar-Tukulti-Ninurta in den Jahren 1986-89, MDOG 122 (1990) 157-171.
R. Dittmann, Assur and Kar-Tukulti-Ninurta, AJA 96 (1992) 307-312.
B. Hrouda, Vorläufiger Bericht über die neuen Ausgrabungen in Assur, Frühjahr 1990, MDOG 123 (1991) 95-109.
A.Y. Ahmad, The archive of Assur-matu-taqqin found in the New town of Assur and dated mainly by post-canonical eponyms, Al-Rafidan 17 (1996) 207-288.
H.H. al-Hayani, Aus den irakischen Grabungen in Assur 1999-2000. Spätassyrische Privathäuser in der Stadtmitte, MDOG 132 (2000) 55-63 (with English summary)
P.A. Miglus et al., Assur 2000 - Frühjahrskampagne, MDOG 132 (2000) 13-54.
G.R.H. Wright, Assur Field I 1990: The excavation and building remains, Anatolica 16 (2000) 193-226.
P.A. Miglus et al., Assur 2001, MDOG 134, in press.
Restoration and reconstruction
M.S. Abdul-Razaq, Results of the work of the Ashur revival commission in the second season 1979, Sumer 42 (1986) 96-97
H. Bashir al-Aswad, Preservation of the Western Gate, Sumer 42 (1986) 122-123.
K. M. Kati, Preservation of Tabira (Kurkuri) Gate, Sumer 42 (1986) 127-128.
Map
Andrae 1938: Beilage.
U. Finkbeiner, B. Pongratz-Leisten, TAVO Map B IV 21: Assur, Wiesbaden 1992.

	K. Kessler, Assyrien bis 800 v. Chr., TAVO Map B IV 10, Wiesbaden 1987. Atlas of Archaeological Sites in Iraq, Baghdad (1970). *Symposia* International Ashur Symposium (1979), Sumer 42 (1986) 95-138 International Ashur Symposium (1981), Sumer 42 (1986) 141-159
d. Address where inventory, records and archives are held.	State Board of Antiquities and Heritage P.O Box 8056 Baghdad – Iraq Telephone: 00964 1 5378732 E-Mail: turath@uruklink.net

8. Signature on behalf of the State Party

Dr. Jaber Khalil Ibrahim
Chairman of the State Board of Antiquities and Heritage
Ministry of Culture
Baghdad, Republic of IRAQ

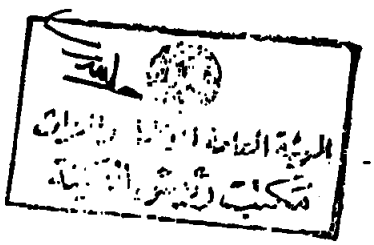
21st , January. 2003

8. Signature on behalf of the State Party

Jaber kh. IBRAHIM

Dr. Jaber Khalil Ibrahim
Chairman of the State Board of Antiquities and Heritage
Ministry of Culture
Baghdad, Republic of IRAQ

21st, January. 2003



Captions to the Slides
attached to the World Heritage List Nomination form
For Ashur, Iraq

Slide 1 Aerial photograph of Ashur from NW indicating the area of public buildings in the N and the test trenches running from W to E at a distance of 100 m to each other. The fortification system is also visible (after Hrouda, B. ed., L'Orient ancien. Paris 1991: 115).

Slide 2 The northern front of Ashur from NW with the Mushlalu (left) and the Ziqqurrat.

Slide 3 The northern front of Ashur from N with the Außenhaken area and the restored Tabira Gate.

Slide 4 The city of Ashur from N with remains of the dump from the test trenches. In the background the Jebel Makhool.

Slide 5 The 'New City' of Ashur from N with the city wall. In the background the Jebel Makhool.

Slide 6 Present day situation of test trench no. 6I from E (excavated by Andrae at the beginning of last century). These test trenches were 5 m wide.

Slide 7 Area of the temple of the god Ashur from NW with the Ottoman barracks - and later Ashur museum (until 1991). In the background the river Tigris and the village of Sdere.

Slide 8 The Ziqqurrat of Ashur from SW.

Slide 9 The restored 'Old Palace' from E (from the top of the ziqqurrat). In the background the double-temple of Anu and Adad (right) and the area of the temples of Nabû and the temples of Ishtar (left).

Slide 10 The royal tombs of Ashur (partly restored) S of the 'Old Palace' from SW. Five kings of the Middle and Neo-Assyrian periods were buried here.

Slide 11 The restored groundplan of the temple of Nabû (foreground) and the restored walls of the double-temple of Anu and Adad (background) from SW. In the background the plain N of Ashur.

Slide 12 The central mound of Ashur from N (from the top of the ziqqurrat) showing recent excavation areas. To the left the river Tigris, in the background the Jebel Makhool.

Slide 13 The central mound of Ashur seen from the southern Old City (from SE).

Slide 14 Main rooms of the Neo-Assyrian palace at the central mound of Ashur excavated by the Iraqi expedition (from S); with orthostats made of baked clay and so-called 'tram-lines' (in front) for mobile heating ovens.

Slide 15 Neo-Assyrian residential quarter S of test trench 8I, excavated by the Iraqi expedition (from SW).

Slide 16 Eastern front of Ashur from S with the excavation house and the river Tigris. The ground floor of the excavation house indicates the maximum flooding level of the reservoir which is ca. 156 m above sea level.

Please note that the arrow on the slide frame indicates the correct position of the slides in the slide tray of the projector.

Captions to the Maps
attached to the World Heritage List Nomination form
for Ashur, Iraq

Map 1 **Area map of the Makhool region**
Directorate General of Antiquities of Iraq, Atlas of archaeological sites in Iraq, Baghdad 1970: Sheet 129.

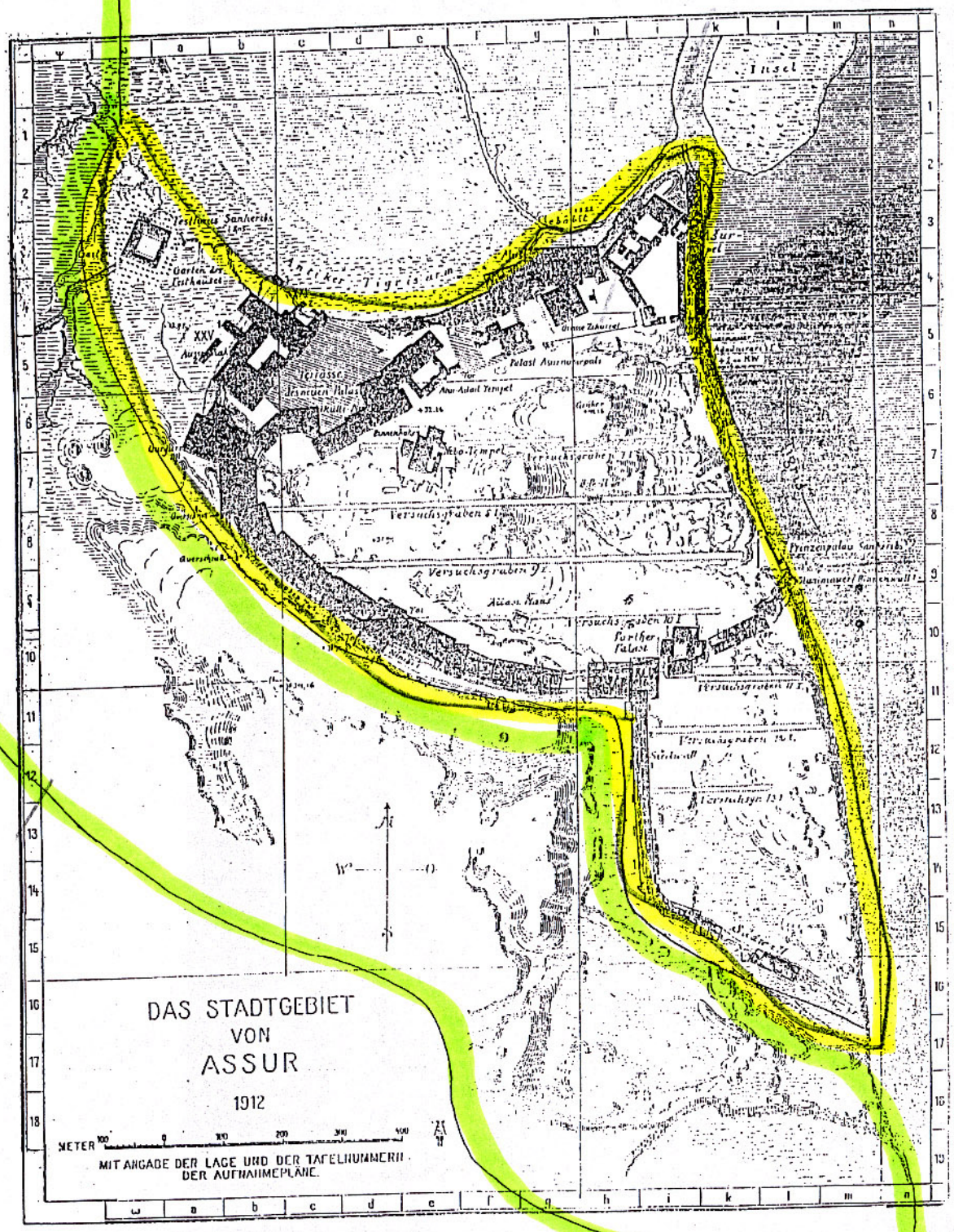
Map 2 **Map of the Makhool Dam reservoir area indicating 61 endangered archaeological sites**
State Board of Antiquities and Heritage of Iraq, Baghdad 2002.

Map 3 **Map of Ashur**
Finkbeiner and Pongratz-Leisten 1992.

Map 4 **Map of Ashur indictaing the approximate flooding**
Based on Finkbeiner and Pongratz-Leisten 1992.

Map 5 **Map of Ashur indicating the location of the site to be nominated (YELLOW) and the buffer zone of 500 m extension (ORANGE) covering non-flooded areas**
Based on Finkbeiner and Pongratz-Leisten 1992.

Map 6 **Historical map of Assyria in the 1st millennium BC**
Kessler 1987.

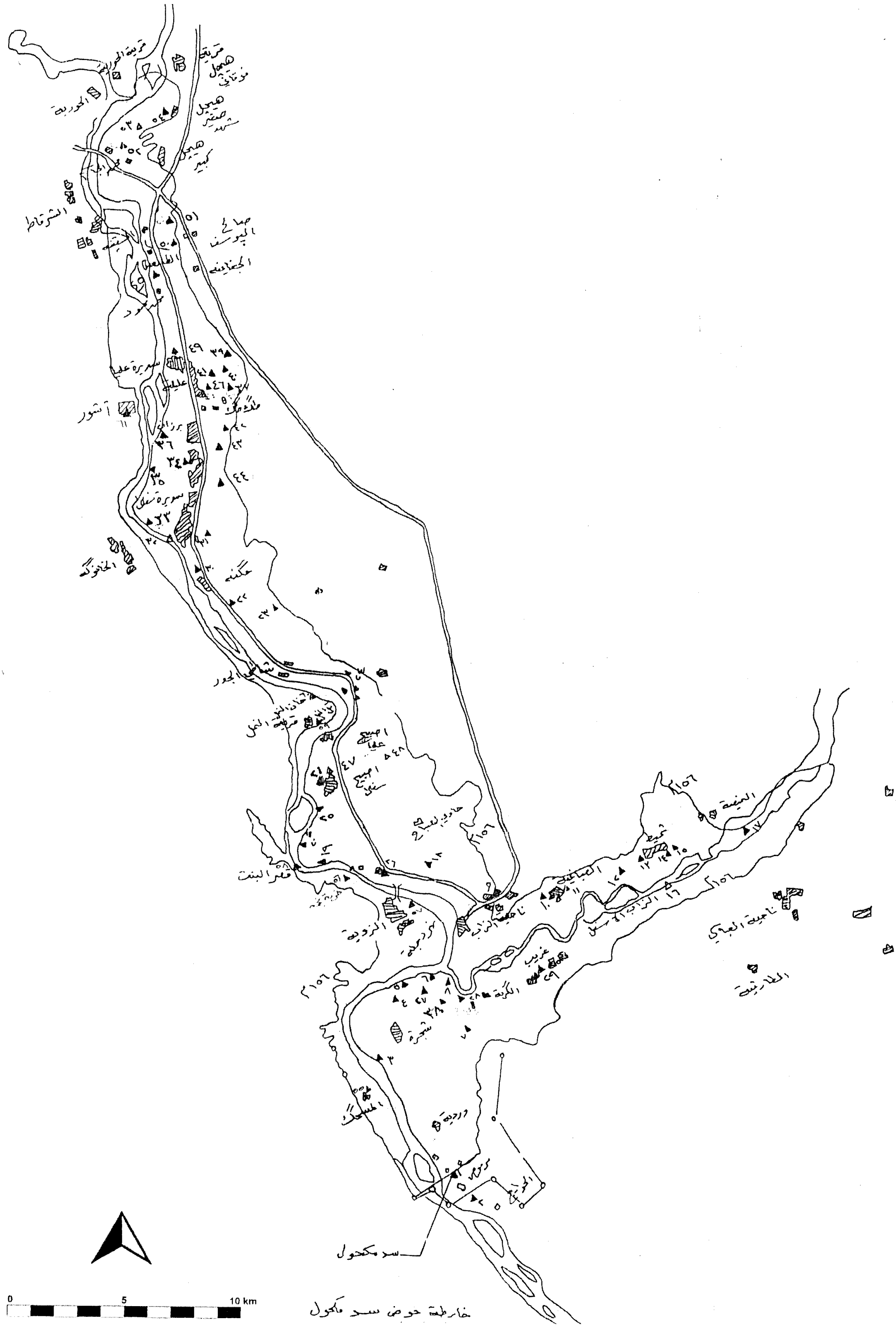


Archaeological plan of the city of ASHUR
After Walter Andrae 1938
Showing the Buffer Zone
(500 m. from the out limits of the city)

= World Heritage proposed Core Zone

= World Heritage proposed Buffer Zone

C 1130
24/06/2003
ITEM 25



خارطة حوض سد مكحول

Altes Flußbett

Neujahrsfesthaus
bīt akīti

(KAK.ME-Tor?)
(abul ^{d}Illunā?) (aA)
(abul KAK.ME/*abul ṣalʾ-me?)* (nA)

Enlil/Aššur-Tempel

(Aššur-Tor?)
(abul ^{d}Aššur?) (mA/nA)

(Ziqqurrat-Tor?)
(abul ziqqurrāte?) (nA)

Mušlālu-Tor
abul mušlāli?
(nA)

Aššur/Enlil-Ziqqurrat

Alter Palast

Tigris

(Šamaš-Tor?)
(abul ^{d}Ea-šarru?) (mA)
(abul ^{d}Šamaš?)
(16.–13. Jh./mA/nA)

Terrasse des „Neuen Palastes"

Anu-Adad-Tempel

Sin-Šamaš-Tempel

Expeditionshaus

Tabira-Tor
abul tašīmtišunu? (aA)
abul Tabira (mA/nA)
abul šīmāte? (spA)

Die Ištar-Tempel

1988/89

1990

1990

Haus des Beschwörungspriesters

Kronprinzenpalast

Šerʾūa-Tor
abul nīšē (aA)
abul ^{d}Šerʾūa (mA)
abul Sūḫi (spA)

Parthischer Palast

Königsstelen

Beamtenstelen

Tisarru-Tor
abul šarri? (aA)
abul Tisarri (mA/aA)

Parthische Grabhäuser

(Ištar-Tor?)
(abul dIštar?) (16.–13. Jh.)
(abul Idiglat?) (mA/nA)
(abul asāte?) (mA)
(abul magarrāt nāri?) (nA)

Übersichtskarte Mesopotamien

Ninive
Khorsabad
Nimrud
Assur
Kār Tuk.-N.
Babylon
Uruk
Ur

Herausgegeben vom Sonderforschungsbereich 19
»Tübinger Atlas des Vorderen Orients (TAVO)«
der Universität Tübingen

Autor: Uwe Finkbeiner, Beate Pongratz-Leisten
Kartographische Bearbeitung: Axel Bengsch
Kartographische Gesamtleitung: Richard Szydlak

Druck: Offizin Chr. Scheufele Stuttgart
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Erschienen: Oktober 1992

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50 0 50 100 150 200 250m
Maßstab 1:4000 Scale


N
Übersichtskarte Mesopotamien
Herausgegeben vom Sonderforschungsbereich 19
»Tübinger Atlas des Vorderen Orients (TAVO)«
der Universität Tübingen
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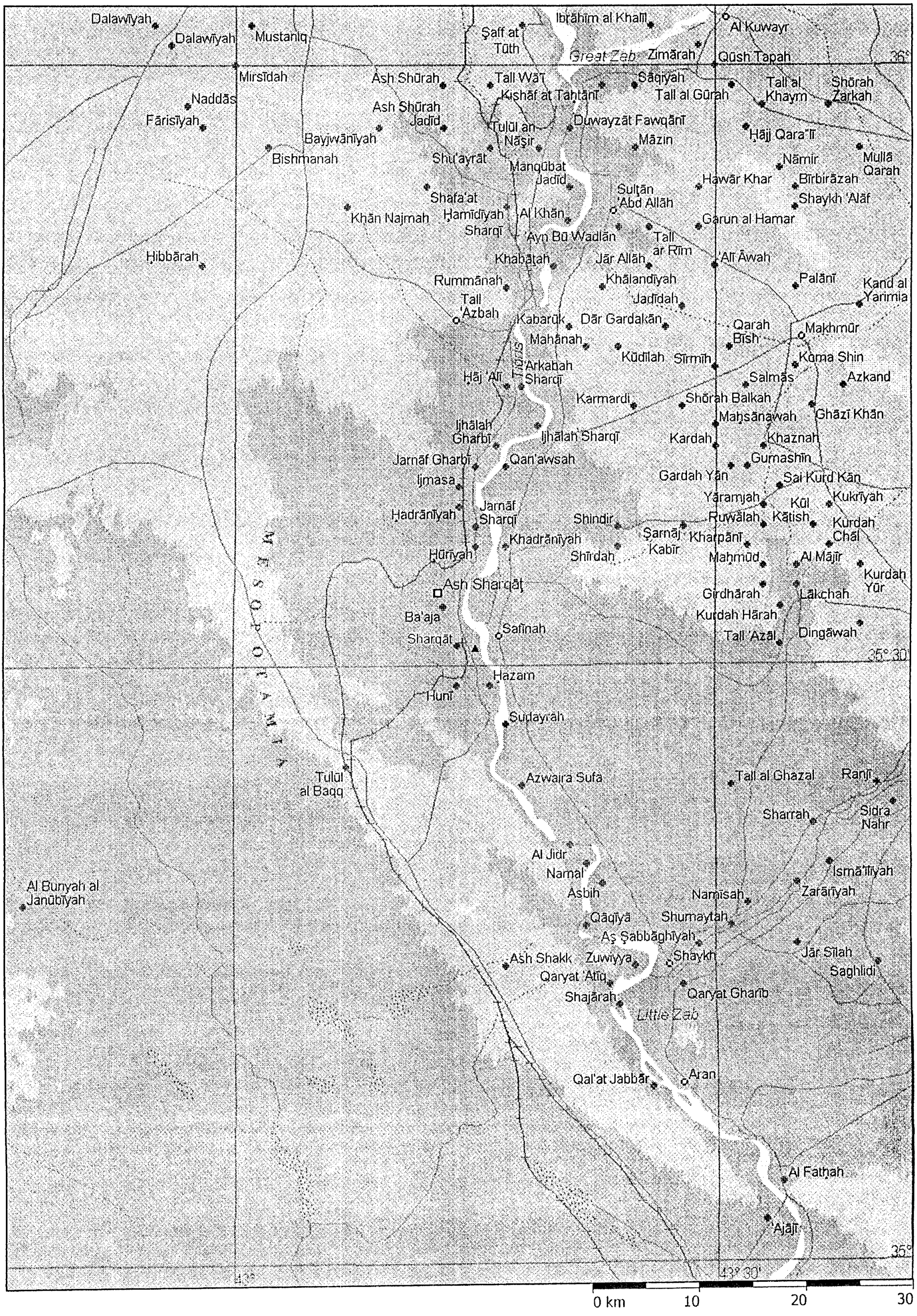


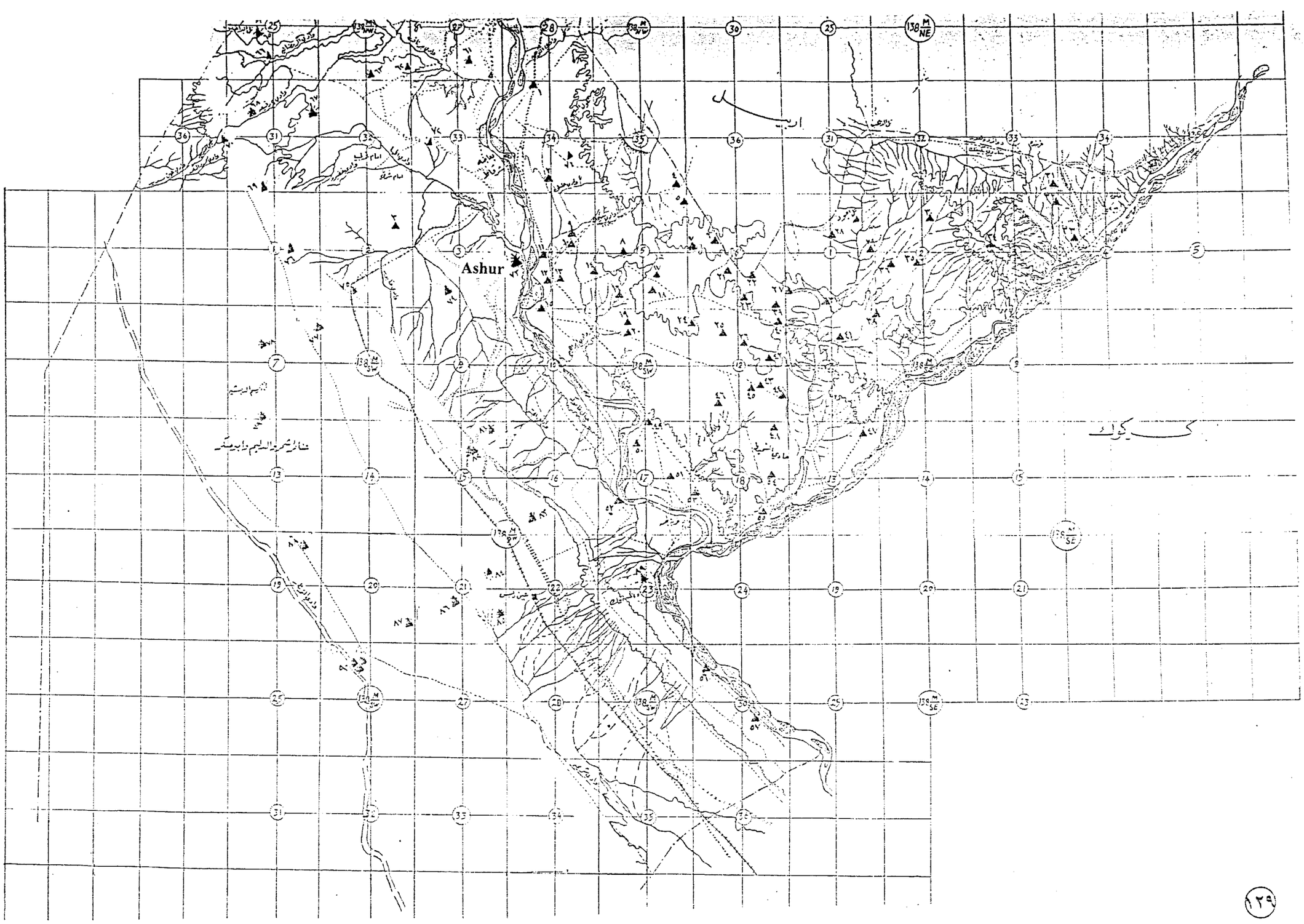
Sharqat / ASHUR

Iraq

C1130
18/04/03
#16

Mesopotamia

C1130
18/04/03
#19



Province: Salah Iddin
Area: Sharqat / Center

Scale: 1 : 390 000

5 0 5 10 15 20 25 Km

Archaeological Sites : ▲
Villages : ■

C1130
18/04/03
#20

Management Plan for the Site of Ashur (Qal'at Sherqat), Iraq

1. Structure of organisation and responsibilities (pertaining to 4.e, 4.f and 4.j)

Republic of Iraq
Ownership, budget

Ministry of Culture
Mr. Hamed Yousuf Hummadi

State Board of Antiquities and Heritage Chairman Dr. J.K. Ibrahim
General management, site supervision and coordination of taken measures DECISION MAKING

Department of Archaeological Excavations and Investigations	**Department of Research**	**Department of Restoration and Conservation**
Supervision and coordination of archaeological expeditions	Supervision and coordination of research strategies	Supervision and coordination of restoration and conservation strategies

Inspector of Antiquities of the province Salah Addin at Tikrit
Mr.Saud Faisal Azzawi

Director of the Iraqi Archaeological Expedition	**Director of the Makhool centre for research**	**Director of the tourism in Tikrit**
Local coordination and execution of archaeological fieldwork of the Iraqi expedition	Local coordination for the archaeological field documentation.	Local coordination of tourist facilities

Director of the German Archaeological Expedition	**Iraqi-International Survey team (IRQ/Multi National)**	**International experts in restoration and conservation**	**International consultants in site planning**
Local coordination and execution of archaeological fieldwork of the German expedition	Execution of an integrated survey in the Makhool Dam reservoir area, including Ashur		

2. Statement of objectives

The research objectives presently constitute

(1) The exploration of the site by means of modern archaeological techniques (stratigraphic excavations, surface survey, remote sensing techniques), depending on the decision about the protective measures against the reservoir

(2) Steps towards conservation and restoration of monuments: measures of continuing conservation, evaluation and improvement

(3) The development of tourist facilities

They are summarised under paragraph 4f in the nomination form.

The two events which require the urgent development of an integrated approach for the salvage of the site of Ashur are

- the construction of the Makhool Dam with a reservoir which constitutes a threat to the site by flooding and infiltration
- the application submitted by the State Board of Antiquities and Heritage for the inscription of Ashur into the World Heritage List.

2.1 The protection of the site and archaeological exploration strategies

Since no definite decision has been made yet on the specific construction of a retaining system, it is not clear which parts of the site and its monuments will be affected. However, it cannot be excluded that extended parts of the site at the northern and eastern margins may be damaged by the erection of this retaining wall. Any construction on the site would have consequences for the salvage strategy of the site.

In view of the present situation, there are three possibly options for the site of Ashur:

a) No retaining wall will be erected and the site will be flooded / infiltrated from 2006 onwards

b) A retaining wall will be erected separated from the site

c) A retaining system will be erected on-site, located on the eastern and northern margins

At present, it is only to a certain degree possible to discuss and develop salvage measures under the given conditions. An outline of salvage strategies will be presented below. Nevertheless, in view of both, the construction of a retaining system and the application for the inscription of the site of Ashur in the WHL, a request of emergency assistance has been submitted to the UNESCO. Assistance is requested for the development of an integrated strategy covering the steps which have to be

undertaken in order to save and preserve the site of Ashur and its monuments - excavated, to be excavated and unexcavated - the best possible way.

Possible salvage measures for the site of Ashur

a) Without protection wall

It is the intention of the Ministry of culture of Iraq and the connected authorities, such as the SBAH, to save the site of Ashur and its monuments. Therefore, this option is considered only theoretical.

From the four research objectives mentioned above remain **the archaeological exploration by excavations** added by any possible remote sensing technique which allows the study of unexcavated areas on the site and its immediate surroundings. Within this scenario, the site will be flooded in the year 2006 (at its lower parts; see map) and, at the beginning; the northern and eastern side will be exposed to infiltration by the waters of the reservoir. Experience at other archaeological sites in the Near East illustrates that also the site of Ashur will be destroyed by the time even though it is impossible to predict the time when any archaeological activities will be impossible. Only if there is no protection at all against the waters of the Makhool Dam reservoir, the entire site will have to be object of a concentrated rescue campaign. Such a campaign should cover areas within the city walls and outside, such as, e.g., the area of the New Year's festival building to the NW of the city, but also other zones. **Protective measures** may refer either to the coverage of excavated areas with earth or to the transfer of objects and specific complexes from the site to museums. Restoration and conservation pertains exclusively to objects removed from their context. The **development of tourist facilities** on the site itself can be excluded in this case. Nevertheless, the construction of an information centre near the site may be taken in consideration.

Time schedule and working programme for rescue excavations

Year	Measure	Location / task
2003	Archaeological excavation	Southern city; Quay along the Tigris river Unexcavated areas in the Southern city and beyond
	Geophysical Survey Surface Survey	Outside the city wall (South) and the New Year's festival building area
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts

Year	Measure	Location / task
2004	Archaeological excavation	Southern city, Quay along the Tigris river, eastern part of the Northern city
	Geophysical Survey	Unexcavated areas in the Southern city and beyond (optional: New Year's festival building area)
	Surface Survey	Outside the city wall (South, West, North)
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts
2005	Archaeological excavation	Southern city, Quay along the Tigris river, eastern part of the Northern city, Northern city
	Geophysical Survey	Unexcavated areas in the city
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts
2006	Archaeological excavation	Southern city, eastern part of the Northern city, Northern city
	Geophysical Survey	Unexcavated areas in the city
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts: transfer of ensembles to museums
	Protection	Coverage of excavated areas
2007-2010	Archaeological excavations	Northern city
	Geophysical survey	Unexcavated areas
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Touristic facilities	Construction of an information centre near the site
2010 -	Archaeological excavations according to a specifically designed strategy (to be developed)	Central parts of the Northern city

b) with a protection wall separated from the site

If a protecting system is constructed entirely separated from the site **archaeological exploration** should concentrate **only on those areas accessible which will be affected** by the construction of such a system. This will be **outside the city walls**. Methods for the study of archaeological data should concentrate on survey, geophysical prospection and archaeological excavation. A surface survey at the southern and northern periphery of the site should be accompanied by geophysical prospection since the question, whether there was any settlement, industrial quarters or a graveyard in the immediate vicinity of the site has never been studied adequately. A geophysical prospection should be adopted in any case in the area of the New Year's festival house which a hundred years

ago had been studied by means of excavation at the spot itself. Archaeological excavations should be carried out in areas with anomalies or concentration of surface finds. Within the city walls, there will be no need of enhanced salvage measures.

Since the other objectives, i.e. steps towards **conservation and restoration** and the **development of tourist facilities** will be the same (at least in terms of the management level) whether there is a protective system separated from the site or on-site, they will be discussed below.

c) with a protection system on-site (gabions at the northern and eastern margin of the site)
Within the State Board of Antiquities and also on the occasion of the UNESCO visit last November, the option of a rather cost-effective solution for the protection of the site of Ashur was discussed. It is basically the so-called ”gabion”-system which makes use of the existing shape of the site since the gabions will be placed at the slopes of the margins of Ashur. If this solution is adopted, parts of the site will be destroyed by the erection of supporting measures, other parts will be covered by the gabions forever. It is only these limited parts of the site which will be object of an intensive archaeological rescue operation.

Due to the specific topographic situation **archaeological excavations** will be the key method for the exploration of the affected areas. **Geophysical prospections** equally form an accompanying exploration method in this area. At the north of the site it will be the area from the Tabira gate and *Außenhaken*-area in the west to the Mushlalu gate complex at the central northern flank until the area of the temple of Ashur. At the eastern side it will be the entire zone bordering the river from the temple of Ashur down to the end of the city wall of the New City in the south and beyond. Due to the topography of the site, the eastern area will be affected more intensely by a gabion system, since parts of the central and southern city are lying below the reservoir level (156 m), basically the area south of the expedition house. The actual topography combined with the superimposed archaeological deposits requires a detailed and careful research strategy.

Thorough stratigraphic excavations will have to be carried out in the affected areas. Presently, it seems that there are considerable differences in height, which led to the erection of substantial retaining walls by means of quarry-stones. A second issue concerns the study of the entire riverside of the site, an area which is partly covered by the Tigris today. So far, archaeological research concentrated on the northeastern zone, i.e. below the temple of Ashur.

The exact area affected by the erection of a gabion-system is not known yet, nor has there a decision been made on which system will be applied for the protection of the site. It should be stated that the results of the drilling operations on behalf of the construction company are will provide valuable information about the archaeological deposits in the affected areas. Therefore, cooperation seems desirable.

Time schedule and working programme for rescue excavations

Year	Measure	Location / task
2003	Archaeological excavation	Affected areas at the northern and eastern margins
	Geophysical Survey	Unexcavated areas in the eastern parts of the Southern city and beyond
	Surface Survey	Outside the city wall (South and North)
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Conservation and restoration	Selected objects and contexts from excavations
		Preparation of a management plan (implementation, monitoring, development
	Touristic facilities	Preparation of a management plan (several steps)
2004	Archaeological excavation	Affected areas at the northern and eastern margins
	Geophysical Survey	Unexcavated areas in the eastern parts of the Southern city and the northern periphery
	Surface Survey	Outside the city wall (south and north)
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Conservation and restoration	Selected objects and contexts from excavations
		Implementation (conservation of already restored buildings)
	Touristic facilities	Implementation
2005	Archaeological excavation	Affected areas at the northern and eastern margins
	Geophysical Survey	Unexcavated areas in the eastern parts of the Southern city and the northern periphery
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Conservation and restoration	Selected objects and contexts
		Conservation and restoration of already restored buildings
		Evaluation and conclusions for future measures
		Application of restoration measures for excavated buildings
	Touristic facilities	Implementation

2006	Archaeological excavation Record Conservation and restoration Protection Tourist facilities	Affected areas at the northern and eastern margins Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis Selected objects and contexts: transfer of ensembles to museums Application of restoration measures for excavated buildings Coverage of excavated areas Implementation
2007-	Regular archaeological excavations according to an archaeological strategy for the site Geophysical survey Record Conservation and restoration Touristic facilities	Northern city and Southern city Unexcavated areas Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis First review phase First review phase

2.2 Conservation and restoration

It is the aim of the State Board of Antiquities and heritage to develop a **conservation and restoration** programme for the site. One part concerns actual conservation and restoration activities on the site; a second part pertains to the Makhool research centre (MRC) and to its function as a training facility for local staff.

Generally, it is aimed to further develop the conservation policy which had been adopted in the late 70s. This is the careful conservation and smooth restoration of excavated archaeological features. Usually, this is architectural remains. In addition to the large palatial or cultic architectural complexes (such as temples, palaces and gates), it is aimed at exemplifying the life of the inhabitants of the site. Numerous well-preserved residential buildings of different social groups within the city will help to illustrate the conditions of daily life in the city of Ashur. The building material and d the climatic conditions require constant care of taken conservation measures. These will consist of traditional techniques, such as, e.g., mud brick-plaster. This conservation strategy will also have to be applied also for already existing restorations, since they are now threatened by erosion.

As to new restoration activities, they will **not** concentrate on an entire and overall reconstruction of monuments and buildings but on the protection of excavated structures. Only selected specific and characteristic features will be taken in consideration. This is important for the understanding of those

processes which start with the discovery of archaeological remains and extend to the interpretation of them. With the long history of excavations. interpretations and reconstructions at Ashur, there is a unique chance to illustrate the achievements of different methodologies of restoration. Actual restorations in the field will be accompanied by a reader / flyer presenting the reason, potential and limits of restoration activities during the last hundred years.

2.3 Tourist facilities

The development of **tourist facilities** on the site will follow the same strategy of a smooth archaeological tourism. The activities of tourists will concentrate on the northern city, this is

(a) the area of public buildings (from the Tabira gate to the temple of Ashur)

(b) the area of private houses in the central part of the northern city. From here, the entire site can be overlooked.

As an option

(c) there is a pathway which carefully leads through the site down to the southern city.

In view of ongoing excavations this step will have to be discussed in a second step of planning. Any new constructions for tourists will be erected outside the city walls. This pertains to a car and bus park area, a rest house with a small restaurant and toilets, a souvenir shop with ticket sales and information facilities.

In order to protect excavated and unexcavated archaeological remains (and deposits) visitors will be obliged to visit the site by walking. Information plates with explanations in Arabic and English will be placed in the vicinity to architectural complexes. Initially, the tourist facilities will be coordinated by specialists from the Makhool research centre which are employed by the Ministry of Tourism.

REPORT ON THE ASSESSMENT OF THE IMPACT OF THE MAKHOOL DAM PROJECT ON THE SITE OF ASHUR AND OTHER ARCHAEOLOGICAL SITES IN THE FUTURE RESERVOIR AREA

MISSION TO IRAQ (18-28 NOVEMBER 2002)

TABLE OF CONTENTS

1. Executive Summary

Introduction

Within the context of the construction of a dam on the Tigris River some 230 km north of Baghdad, endangering cultural heritage, this assessment mission to Iraq was organized by the World Heritage Centre, the Division of Cultural Heritage and the UNESCO Amman Office. It consisted of two experts, one Italian hydraulics engineer (Eng. Lucio Cavazza) and one German archaeologist (Dr Arnulf Hausleiter), accompanied by a UNESCO Programme Specialist (Ms Veronique Dauge) as coordinator, and was carried out from 18 to 28 November 2002.

The main objective of the mission was to assess the impact on archaeological sites of the flooding of a large area further to the construction of the Makhool Dam. As stated in the report provided by the Iraqi Ministry of Culture in August 2002 (see annex), UNESCO's assistance was requested in planning a salvage excavation campaign and in providing expertise with regards to the feasibility of building a protective wall for the site of Ashur. It is to be noted that the nomination file for the inscription of Ashur on the World Heritage List was submitted to the World Heritage Centre in September 2002, altogether with a "Request for emergency assistance".

One of the significant points of the mission was the exceptional welcome provided to the team and the quality of the lengthy working sessions held. Full assistance and cooperation was received from the National Commission for UNESCO and from the State Board of Antiquities and Heritage.

The Makhool Dam area

The team visited the supervision office of the Ministry of Irrigation for the construction of the Makhool Dam, where a plan drawing of the structure was exhibited. Heavy excavation works are underway in preparing the dam foundation area, notably the digging of the cut-off wall in the riverbed, presumably also for the hydroelectric power station. Unfortunately, no specific documentation on the effective construction and technical studies was presented, thus not allowing the hydraulics engineer to make any assessment. A further meeting took place in Baghdad with responsible persons at the Ministry of Irrigation, but no additional information on the project was given. Upon questioning, it was asserted that a feasibility study had been carried out prior to the final design of the dam, including an environmental impact assessment.

Sixty-three sites, including Ashur, have been identified so far in the zone of the reservoir, of which 62 will be flooded by the end of 2006. Six of them were visited by the mission. The State Board of Antiquities has started an intensive salvage excavation campaign, devoting a large amount of staff and funds to the project, which, it is hoped, will be supported by UNESCO and international scientific institutions. The information provided by the State Board (see report in annex), allows an evaluation of the priorities with respect to the sites affected by the construction of the dam.

The city of Ashur

A full day visit was devoted to the site of Ashur, where the team was joined by the Chairman of the State Board of Antiquities and Heritage. A general assessment of the site was carried out, in view of the possible inscription of the site on the World Heritage List and, particularly, as regards the risks of flooding.

Since the reservoir is to be used for hydroelectric power generation, it will generally be kept at the maximum possible level, compatible with the available runoff from the catchment and any provision of irrigation water to downstream users. The possibility of water infiltration and seepage to the archaeological excavation areas is a real threat and provisions must be made to deal with the problem. However, due to the non-availability of the technical documentation on the environmental impact of the dam and on the level of water of the future reservoir, as well as of detailed topographic information, the expected damage on the archaeological remains, and the possible measures to avoid it (retaining wall, gabions, etc.), could only be evaluated approximately.

The planning of salvage measures which can be envisaged for the site of Ashur is to bear two components: the feasibility of building a retaining wall, for which detailed information is needed (see above); and the development of an integrated research strategy for the site including archaeological exploration and excavations, conservation and restoration measures as well as the presentation and interpretation of the remains.

In order to coordinate the archaeological fieldwork during the remaining four years (2003-2006), the Iraqi authorities intend to establish in the very near future a well-equipped local research centre for the entire project, for which UNESCO's assistance is requested.

The team worked extensively during, and after, the mission in assisting the State Board of Antiquities and Heritage in revising the nomination file for the inscription of Ashur on the World Heritage List as well as the Emergency assitance request form. The activities mentioned above were included and described within this request which has been submitted by the Iraqi Authorities to the World Heritage Centre.

Other sites

The team also visited other important Iraqi cultural heritage sites, such as Hatra, inscribed on the World Heritage List, where important restoration work is being carried out, Nineveh and Nimrud, Samarra and the fortress of Al-Ukhaider, which have been identified on the Iraqi World Heritage Indicative List, as well as the partly reconstructed city of Babylon.

Meetings

Upon arrival of the team, a meeting took place at the Ministry of Education, with the Minister, H.E. Dr Fahad Salim Al-Shaqra, members of the UNESCO National Commission and of the State Board of Antiquities. The Minister presented the expectations of the Iraqi authorities in regard to this mission and stressed the concern and full commitment of the Government to safeguard the antique capital city of Ashur and record all evidence related to the sites in the Makhool Dam reservoir area.

Several meetings were also held at the State Board of Antiquities and Heritage, notably with Dr Jaber Khalil Ibrahim, Chairman of the Board, and his staff. Dr Donny George, Director-General of Research and Studies, accompanied the mission during the whole visit, as well as Ms Khamael Hussein and Mr Loai Al-Umari from the Iraqi National Commission for UNESCO.

At the end of the mission, a meeting took place with H.E. Mr Hamed Yussuf Hammadi, Minister of Culture, during which the whole mission was discussed at length, as well as the possibilities for UNESCO to support an international salvage project for the Makhool Dam area and Ashur. Besides an invitation letter which will be addressed by the Iraqi authorities to all scientific institutions having worked in Iraq, it is hoped that UNESCO would agree to launch an appeal to the international community to support the project. The possibility of organizing a congress on the Makhool Dam area was also mentioned by the Minister.

Main recommendations

- In view of the remaining four years for the completion of the rescue operations in the area (2003-2006), and taking into account the considerable amount of archaeological work and research required, the mission recommends that the Iraqi Authorities launch an invitation to archaeological expeditions on an international level for carrying out salvage excavations and studies of the Makhool Dam reservoir area's sites and landscape, and that UNESCO supports such an appeal and salvage project.

- As envisaged by the State Board of Antiquities and Heritage, the mission recommends the establishment of a Coordination centre for the archaeological research in Ashur and the whole area, which would be supported by UNESCO and the World Heritage Fund through the Emergency Assistance Request submitted by the Iraqi Authorities.

- The archaeological sites of Ashur, the other sites in the future reservoir area and the archaeological landscape are equally important for the research of the cultures and civilisations of this part of Assyria. Therefore, an integrated approach is recommended, combining on-site and off-site research in the area, based on archaeological survey strategies, archaeological excavations and scientific methods of analysis.

- The implementation of salvage measures for the site of Ashur depends mainly on the decision on which retaining system will be erected. Only based on this, a research strategy for the site covering archaeological exploration, restoration and conservation measures as well as the presentation of the remains can be applied.

- As regards the protective measures to be implemented around the city of Ashur, no information was made available on the future operation and management of the reservoir, so it is not known what the excursions of the water levels at the site would amount to. Such information is essential for the study of adequate protections from both the reservoir waters and the eventual infiltrations and leakages to the existing and future excavation sites of Ashur. However, essentially two types of solutions are proposed for maintaining the site and archaeological excavations free of seepage and infiltration waters:
  (a) the construction of an earth embankment with impermeable core and cutoff wall into the foundations, a solution much similar to the main dam at Makhool. Such a solution would be obviously quite cost-effective as all equipment, materials, etc. are the same as for the construction of the main dam.
  (b) The construction of a “Terramesh” wall with impermeable membrane lining as a solution for the soil reinforcement of the escarpments at the Ashur Site down to the Tigris River. Such a solution makes uses of eco-compatible materials and bio-engineering techniques, combining suitable soils and plants with the natural fill materials. This offers immediate stabilization of the slopes and the re-naturalisation over time by promoting a positive evolution of the new ecosystem created by the reservoir.

Conclusion

Although some technical issues were not solved, the mission was extremely positive and encouraging for future cooperation, notably in light of the confidence in UNESCO shown by all our counterparts. It is strongly hoped that the information requested be made available as soon as possible by the

relevant authorities so that technically sound recommendations can be made regarding the protective measures for Ashur. As regards the World Heritage, the updated nomination file for Ashur and the revised emergency assistance request have been officially submitted to the World Heritage Centre in January 2003.

2. Engineering Report

by Eng. Lucio Cavazza

Contents

RESUME: ASHUR, the religious capital of the ancient Assyrian kingdom is under threat of inundation from the rising waters of an artificial lake or reservoir created by the construction of a large dam at Makhool, already underway some 30 to 40 km to the south of the ancient city on the Tigris river. Suitable protections to the north, east and south around the promontory on which rests the remains of the city, as discovered from excavations starting in the early 1900's, are urgently needed in view also of its inscription in the World Heritage List of Monuments, managed by UNESCO.

1. GENERAL

ASHUR (the modern Qalat Sharqat), the earliest and oldest of the four Assyrian capitals (it was first settled in the 3rd millenium BC), lies on the western, right bank of the river Tigris on a bluff or plateau covering an area of about 100 ha, and is situated some 96 km south of Mosul (the ancient Nineveh) almost halfway between the two left-bank tributaries of the Tigris, the Lower and Upper Zab rivers.

The whole area lies some tens of metres above the mean water levels of the Tigris river and in fact there are no records of flooding of the present archaeological sites. The attached map overleaf, (Figure 1) at a scale of 1:4.000, shows the extent of the area to be protected, some 70 ha for the ancient city and another 100 ha approximately as a buffer zone. The 10 m contour line appearing on the map has been indicated as corresponding approximately to the maximum reservoir level anticipated at 156 m asl.

There is however quite a large dam under construction further to the south, some 30 to 40 km downstream of this site, with a reservoir at its full capacity of some 3 billions m^3 of water, reaching a maximum level of 156 m asl.

Under these conditions parts of the city, especially to the south, would be flooded for certain periods of the year once the reservoir becomes operational by 2006 as anticipated, and in any case the archaeological remains of the ancient structures would suffer from infiltration and seepage of underground waters. In fact the phreatic levels in the foundations of the whole area would rise considerably as the level of the reservoir formed by the dam, rises to its maximum levels.

While the dam and reservoir are purpoted to be principally for irrigation purposes, there is nevertheless incorporated in the dam also a hydropower station exploiting the relatively large flows released from the reservoir and the head available from maximum reservoir level to the turbine elevation, for the generation of some 300 MW of hydroelectric power.

It is therefore necessary to protect the Ashur site with adequate measures especially in view of its inscription in the World Heritage List of Monuments, managed by UNESCO.

There are also in the area of the reservoir some 60 other archaeological sites of lesser importance, for which it is anticipated to launch a world-wide intensive salvage excavation campaign with UNESCO's and other international scientific organizations' assistance and cooperation from the National Commission for

UNESCO and from the State Board of Antiquities and Heritage, which is already devoting a large amount of staff and funds towards the project.

These sites however will ultimately be flooded by the Makhool reservoir once it reaches its maximum levels, anticipated for the year 2006.

2. MAKHOOL DAM & RESERVOIR

General

The project for the dam and reservoir at the Makhool site has been carried out by the Ministry of Irrigation staff with the assistance of the Al Furat Company which is a specialized department of the same Ministry. This same company is also responsible for the studies, investigations and design of the protective measures for the Ashur site.

The dam in now under construction, the main contractor being also a subsidiary of the Irrigation Ministry – presumably some of the works would be carried out by other specialized sub-contractors. The Site Supervision activity is carried out by the Ministry's staff as well.

From the fragmentary information gathered, it would seem that a feasibility study has also been carried out, comprehensive of an EIA (Environmental Impact Assessment). It is not known whether the EIA considered also the 60 odd archaeological sites in the area of the future reservoir, and in particular whether specialized and specific studies were carried out for the Ashur site.

At the time of writing the present report, no factual information has been supplied by the Iraqi authorities to the members of the Mission regarding the eventual feasibility study carried out, the preliminary and final designs documents for the dam and, more importantly, no information was made available on the protective measures being studied for the city of Ashur.

Makhool Dam

The only drawing reviewed by the members of the Mission regarding the dam, consisted in a schematic plan layout of the dam structure and all other appurtenant works, this was actually attached to a wall in the building occupied by the Site Supervision staff. Upon requests for further information, drawings, etc. the Site Engineer replied that all available information could be obtained in Baghdad at the offices of the Ministry.

The dam appears to be a zoned earth embankment type of structure with a cutoff wall 1m thick in bentonitic cement slurry to create an impermeable barrier in the sedimentary foundation strata, with a free overflow spillway concrete structure on one of the abutments in which are incorporated the outlets for the irrigation water releases. At the downstream toe of the dam there is also a hydropower station with all

appurtenant works. Presumably the releases from the hydroelectric station are also utilized for irrigation purposes.

Reservoir

At full storage level of 156 m asl (as indicated by the competent authorities), the dam would impound some 3 billion cubic metres of water, creating an immense reservoir extending some 30 to 40 kms upstream of the dam along the Tigris river and for some kms also on the two Zab rivers. The maximum width of the reservoir just a few kms upstream of the dam at the confluence of the Lower Zab with the Tigris river is about 10 kms. The attached figure 2 shows the extent of the proposed reservoir and the location of the Ashur site.

At the site, the eastern edge of the city facing the Tigris river is at an elevation of 155.38 m asl while the highest levels indicated on the knoll or plateau forming the ancient city, with all the extensive excavations carried out since the earky 1900's to date, are over 179.00 m asl.

To the south of the site however the topography once again slopes downwards toward the river and the escarpments present severe gully erosion. The width of the reservoir in this area should reach 2 to 3 kms with a depth of over 10 m.

No information whatsoever is available on the future operation and management of the reservoir, so it is not known what the excursions of the water levels at the Ashur site would amount to. Such information is essential for the study of adequate protections from both the reservoir waters and the eventual infiltrations and leakages to the existing and future excavation sites of Ashur.

3. ASHUR PROTECTION MEASURES

General

It is known that the Al Furat Company of the Ministry of Irrigation, specialized in these types of works[1], is carrying out detailed investigations (topographical, geological and geotechnical) and studies for the protection measures to be proposed and built at the Ashur site. However to date no information has been made available on this matter – see list of information requested and further clarifications supplied for the Iraqi Ambassador to UNESCO in Paris, attached to the Report.

From the topographical data available it would seem that some protective measures are necessary especially to the south, but also on the eastern flank and to the north of the Ashur site, where the ancient course of the Tigris still exists and would also be flooded by the reservoir. Such measures would be required to hold back the waters of the impounding lake and prevent flooding of the archaeological sites on the promontory forming the Ashur site. The attached FIGURE 3 overleaf shows the northern face of the bluff forming the Ashur site promontory into the future reservoir

[1] **See "An Engineering Treatment for the Underwater Problem in the Foundations of the Princedom House – Dar Al-Imara in kufa" SUMER Vol. L No.1 & 2 1999-2000**

and dates back to 1909 – the present situation in not significantly different from what is shown on the sketch.

Further measures would also be necessary to prevent infiltration and seepage into the foundations of the present and future archaeological sites, as the presence of the dam reservoir would cause groundwater levels to rise throughout the area and remain at high levels, with respect to the present situation, for quite long periods, depending on the reservoir operation (as the lake is also to be used for power generation, then generally the water levels would be kept at full reservoir for maximum head on the turbines!). The attached soil map overleaf, FIGURE 4, indicates that the materials in the area are mostly of the sedimentary type, silty gravelly gypsiferous soils with, presumably, high permeability.

Protective Measures Proposed

After the detailed visit to the site – see the attached photographs, included as ANNEX 1, of the relevant areas to be studied and protected– and what little information could be gathered from the concerned authorities, some indications on the types of protective measures that could be adopted for the Ashur site are given in what follows.

Essentially two (2) types of solutions are proposed, with further indications on other provisions which may be useful for maintaining the archaeological excavations free of seepage and infiltration waters – the structures to be protected are made from sun-dried clay bricks for which the presence of humidity is quite deleterious.

The solutions proposed do not in any way exclude the construction of a separate structure where this is necessary, i.e. where it is not possible to simply protect the existing slopes and escarpments but it is necessary, on the other hand, to leave a buffer zone between the protection structure and the existing or future archaeological excavations.

1. Construction of an earth embankment with impermeable core and cutoff wall into the foundations, a solution much similar to the main dam at Makhool. Such a solution would be obviously quite cost-effective as all equipment, materials, etc. are the same as for the construction of the main dam.

   It is not clear at the moment whether a full dam section is necessary (both upstream and downstream slopes, etc.) or if it is feasible to carry out only the upstream part of the protective embankment, with the present slopes of the Ashur promontory (suitably cut back to sound foundation material) forming the remainder of the embankment – see the attached AUTOCAD drawing overleaf, FIGURE 5.

   From a preliminary estimate of the quantities involved, the earthworks could amount to some half a million cubic metres of materials, with the cutoff extending over about 2 kms for a depth of 5 to 10 m, for a thickness of not

more than 60 cm. The attached drawing shows a schematic detail of the solution proposed, to be verified and modified according to the actual site conditions, as would be indicated from a detailed topographical survey of the area.

Rough costs, to be verified with the Iraqi counterparts, could be:

- earthworks $USA 100 per metre cube
- cutoff wall $USA 1000 per metre length.

The total cost could be of the order of some $USA 30 million.

2. TERRAMESH walls with impermeable membrane lining, MACLINE Geo Clay Liners, by Maccaferri

   A brief note and schematic presentation of a possible solution are given in what follows.

TERRAMESH SYSTEM – A Solution For Soil Reinforcement

The Terramesh System uses a combination of gabions and mechanically reinforced soil to create a structure for the protection and support of slopes. A vertical or sub-vertical skin of gabions is anchored to the backfill by using metal strips or double twist woven steel wire mesh panels as reinforcement along horizontal planes. The use of such a mesh exploits not only the friction on the surface of the wires but, more importantly, the mechanical interlocking properties of the backfill due to the large size of the openings of the mesh in relation to the diameter of the wires, and results in an increase of the total strength of the reinforcement, which would be impossible for materials whose strength is derived solely from surface friction. Further, by using panels of mesh, the reinforcement is continuous along the whole length of the slope being protected.

Structures up to 20 m high have been successfully used throughout the world with the following important advantages:

- permeability of the front face guaranteeing drainage of the backfill;
- flexibility, enabling the structure to take up ground settlement without compromising its structural integrity;
- ease of construction, significant soundproofing characteristics and structural safety in case of fire near the front face;
- reduction of environmental impact through the use of vegetation incorporated into the front face of the structure which, through the versatility of gabions, may be formed with vertical, battered or stepped front face as required, with minimal environmental impact.

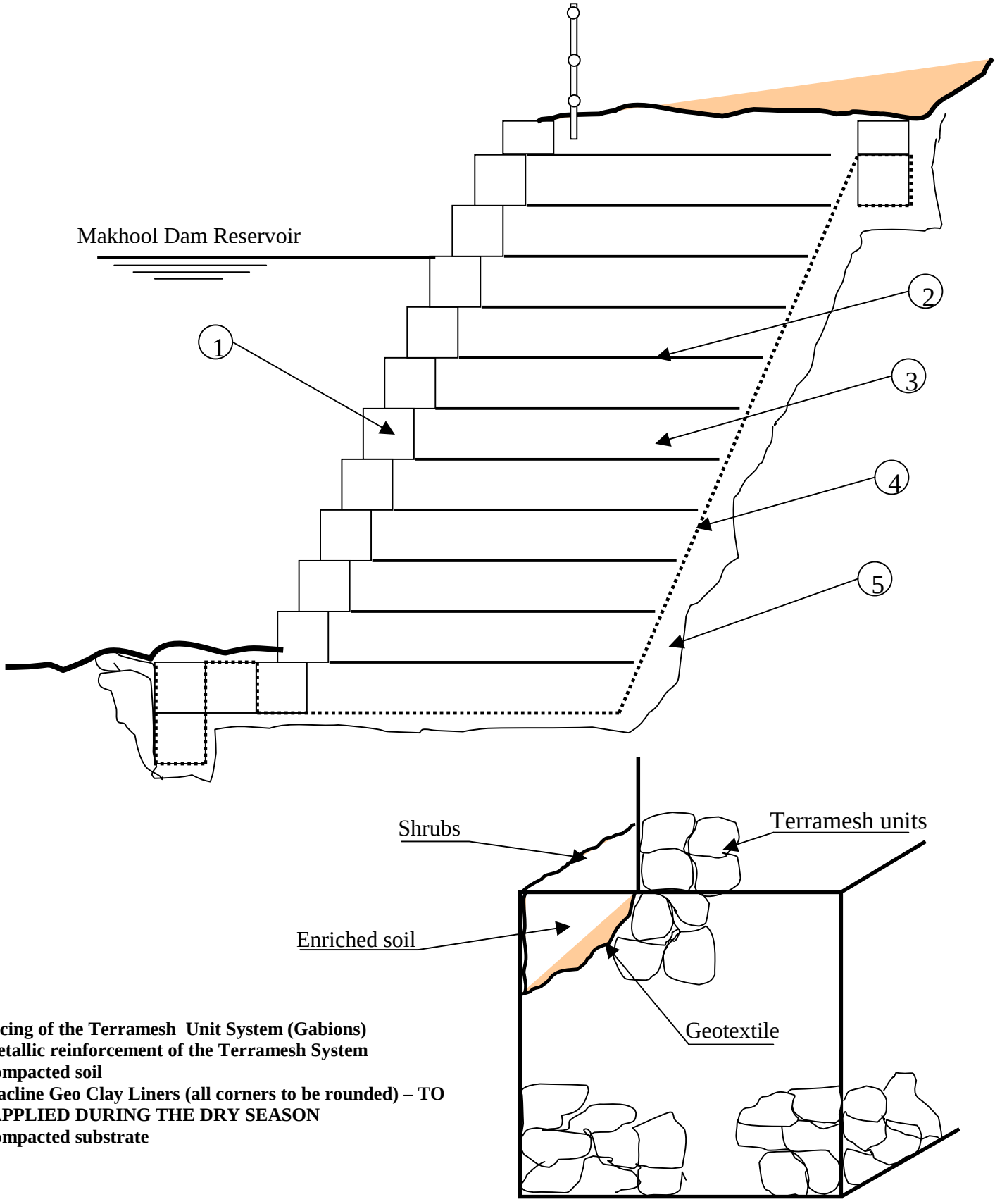
To ensure optimum performance from the finished structure while simplifying the installation, have led to the development of a product in PVC-coated and galvanized double-twist woven wire mesh specially produced for these applications. The front face and soil reinforcement tail is made from one continuous mesh panel.

There are two different basic Terramesh structures, depending on the type of front face; one is in stone-filled box gabions (Terramesh unit) and the other is entirely filled with soil (Green Terramesh Reinforced unit of the “Water” type or “Soil” type). The Green Terramesh Reinforced unit, “Soil” type, is used for soil consolidation works and/or for retention of embankments and slopes, while the “Water” type, which differs in the geo-synthetics used (three-dimensional geogrid or other synthetic materials), can be used for bank protection of water courses.

The attached FIGURE 6 overleaf shows a typical solution of what has been described above.

Rough costs, to be verified with the Iraqi counterparts, are of the order of $USA 1000 per metre square of slope protection for a total cost of the order of some $USA 20 million.

TYPICAL TERRAMESH PROTECTION WITH MACLINE GCL LINER --- ***FIGURE 6***



1: Facing of the Terramesh Unit System (Gabions)
2: Metallic reinforcement of the Terramesh System
3: Compacted soil
4: Macline Geo Clay Liners (all corners to be rounded) – TO BE APPLIED DURING THE DRY SEASON
5: Compacted substrate

Other Interventions

In addition to the protection of the whole site of Ashur from the waters of the future reservoir, it may be necessary to protect certain specific areas where the archaeological excavations have been carried out and/or for future excavations to greater depths, in view of the future rise in groundwater levels throughout the area.

One possible type of intervention consists of **sand drains** around the periphery or perimeter of the excavations. Such sand drains would be constructed by drilling large diameter holes (up to 1 m in diameter) to the depth necessary to de-water the excavations, and by backfilling these holes with free-draining material, suitably graded, and protected with geotextile sheets to avoid migration of the finer particles of the site material into the drains and clog or choke them up. The underground waters would then tend to migrate to these drains and rise to the top from where they would then be collected by a surface system of drains and carried away from the excavation site.

As an ultimate solution to the problem of dewatering the foundations of the archaeological excavations, the use of **sump pits and pumps** may be indicated for those areas where the problem with the higher groundwater levels is of a temporary nature and not persistent. The excavation of suitably dimensioned sump pits with bottom levels well below the archaeological excavation levels and/or the groundwater levels, is indicated in any case for the collection of rainwater and surface waters which tend to collect in the various excavation sites.

ANNEX 1: **PHOTOGRAPHS**

Photo No.1: Tigris river to the north-east of Ashur showing confluence of old branch with new course of the river

Photo No.2: Tigris river to the east of Ashur showing use of river water for irrigation and other purposes

Photo No.3: Tigris river to the east of Ashur showing formation of islands on the left bank upstream section of the main stream

Photo No.4: Tigris river to the east of Ashur showing formation of islands on the left bank downstream section of the main stream

Photo No.5: Upstream eastern escarpment of the Ashur promontory sloping down to the Tigris river

Photo No.6: Central eastern escarpment of the Ashur promontory, at location of the guest-house, sloping down to the Tigris river

Photo No.7: Downstream eastern escarpment of the Ashur promontory, showing remains of an old well, with near vertical face down to the Tigris river

Photo No.8: Downstream eastern escarpment of the Ashur promontory with near vertical face down to the Tigris river, showing effects of gully erosion

Photo No.9: Downstream eastern escarpment of the Ashur promontory sloping gently down to the Tigris river, showing extensive gravel deposits

Photo No.10: Downstream south-eastern escarpment of the Ashur promontory sloping gently down to the Tigris river, showing sand and other fine material deposits

PHOTO No. 1

PHOTO No. 2

PHOTO No. 3

PHOTO No. 4

PHOTO No. 5

PHOTO No. 6

PHOTO No. 7

PHOTO No. 8

PHOTO No. 9

PHOTO No. 10

ANNEX 2: ***FIGURES***

FIGURE 1

Neujahrsfesthaus
bīt akīti

Altes Flußbett

(KAK.ME-Tor?)
(abul dIlunâ?) (aA)
(abul KAK.ME/abul ṣalī-me?) (nA)

Enlil/Aššur-Tempel

(Aššur-Tor?)
(abul dAššur?) (mA/nA)

(Ziqqurrat-Tor?)
(abul ziqqurrāte?) (nA)

Mušlālu-Tor
abul mušlālī (nA)

Aššur/Enlil-Ziqqurat

Alter Palast

Terrasse des Neuen Palastes

Anu-Adad-Tempel

Sîn-Šamaš-Tempel

(Šamaš-Tor?)
(abul dEa-šarru?) (mA)
(abul dŠamaš?)
(16.–13. Jh./mA/nA)

Tigris

Tabira-Tor
abul tašīmtīšunu? (aA)
abul Tabira (mA/nA)
abul šimāte? (spA)

Die Ištar-Tempel

Expeditionshaus

Haus des Beschwörungspriesters

Kronprinzenpalast

Parthischer Palast

Ša'ūa/Ṭor
abul nīšē (aA)
abul dŠa'ūa (mA)
abul Sūbi (spA)

Tisarru-Tor
abul šerī? (aA)
abul Tisarri (mA/aA)

Königsstelen

Beamtenstelen

Parthische Grabhäuser

(Ištar-Tor?)
(abul dIštar?) (16.–13. Jh.)
(abul Idigla?) (mA/nA)
(abul aṣāte?) (mA)
(abul magarrāt nāri?) (nA)

Übersichtskarte Mesopotamien

Ninive
Khorsabad
Nimrud
Assur
Kar Tukl.-N.
Babylon
Uruk
Ur

Herausgegeben vom Sonderforschungsbereich 19
»Tübinger Atlas des Vorderen Orients (TAVO)«
der Universität Tübingen

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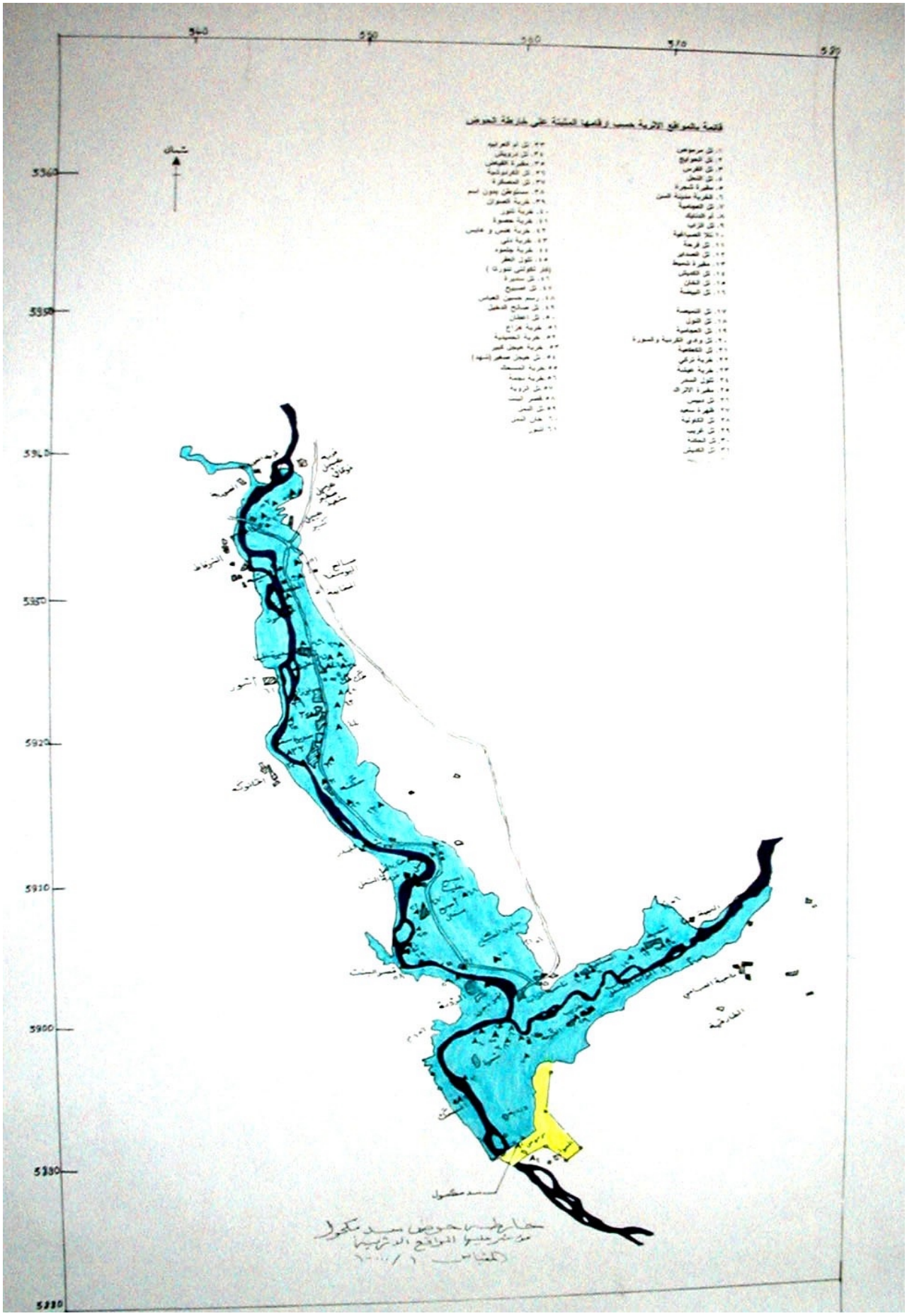
Maßstab 1:4000 Scale
50 0 50 100 150 200 250 m

FIGURE 2


قائمة بالمواقع الأثرية حسب أرقامها المثبتة على خارطة الحوض
شمال
5340
5330
5320
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5290
5280
5340
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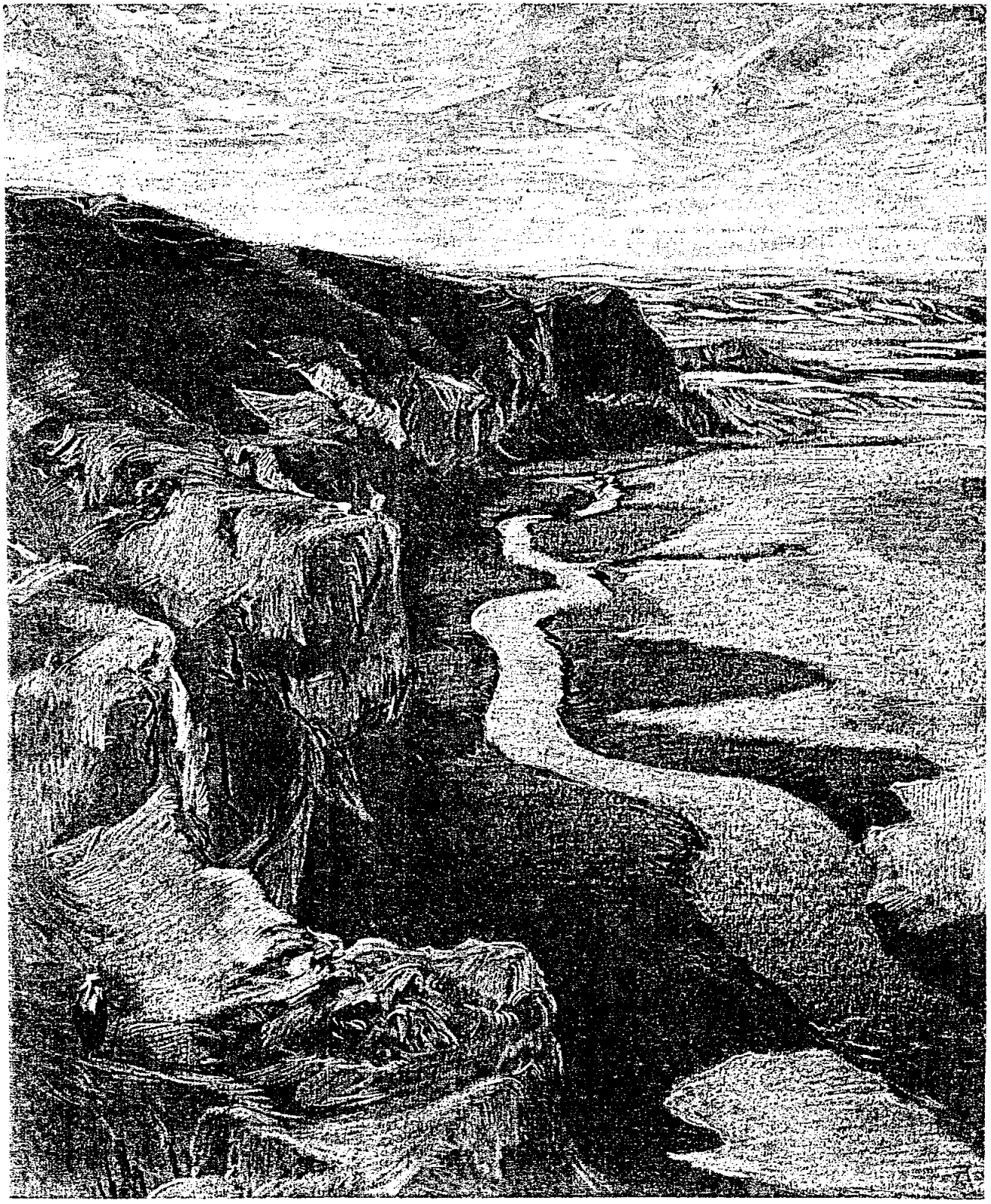
5290
5280



Pl. 1. Walter Andrae, *Ashur: North Face from the East*, 1909. Colored chalk on tinted paper, H. 10 in. (31 cm). Collection of Ernst Andrae

FIGURE 3

FIGURE 4

PL. 4

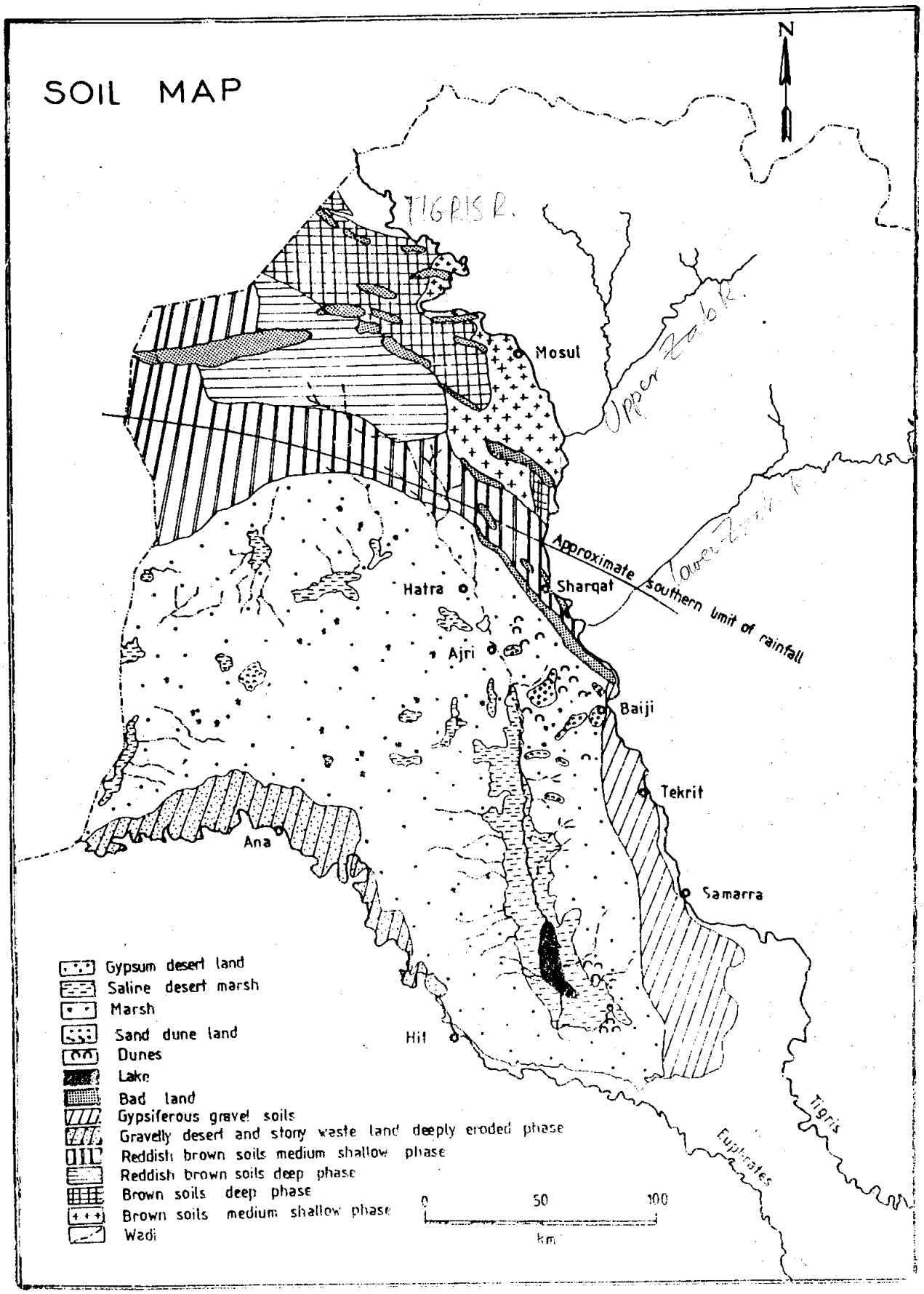
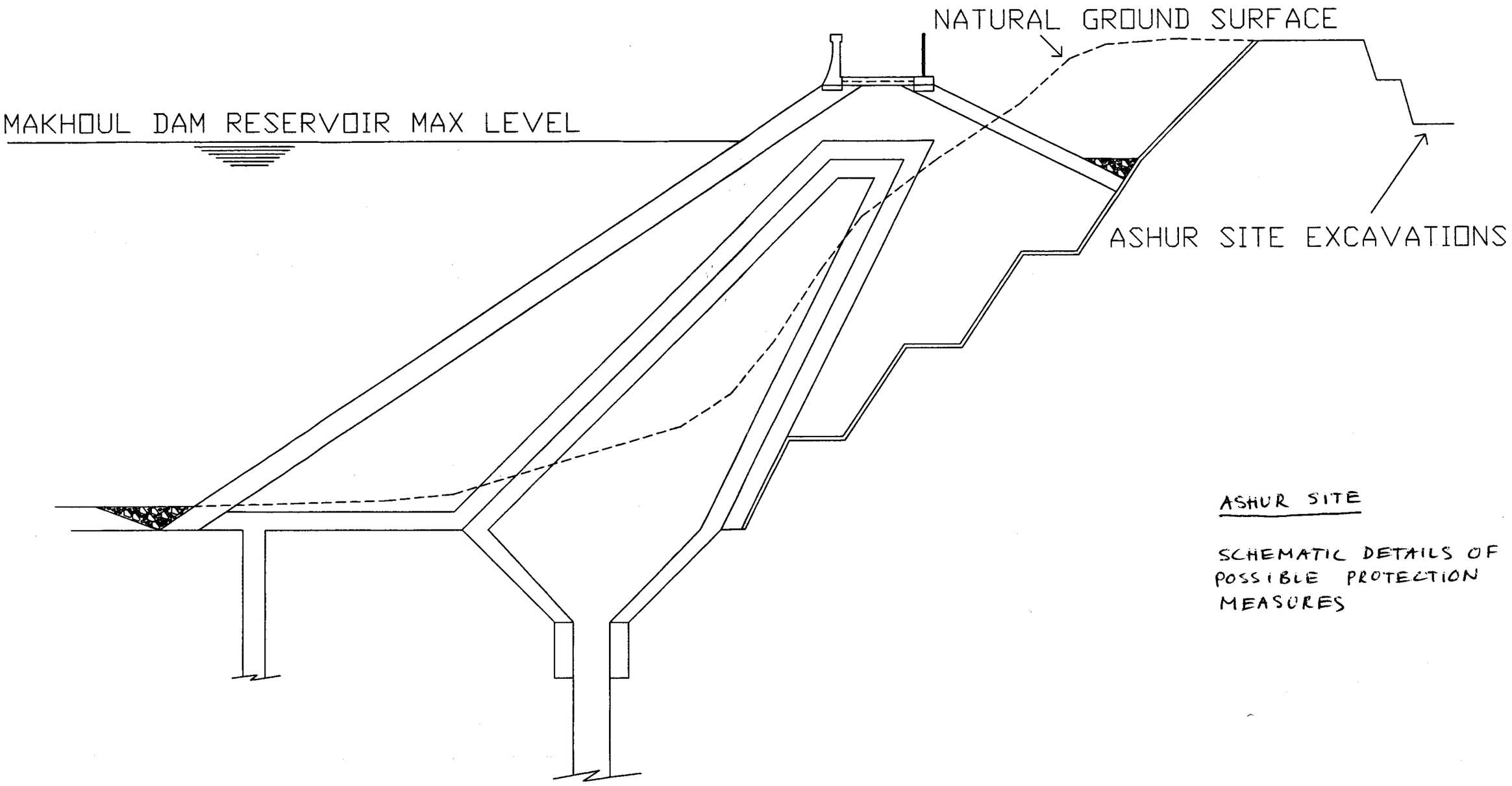

SOIL MAP
N
TIGRIS R.
Mosul
Upper Zab R.
Approximate Southern limit of rainfall
Hatra
Sharqat
Ajri
Baiji
Tekrit
Samarra
Ana
Hit
Tigris
Euphrates
Gypsum desert land
Saline desert marsh
Marsh
Sand dune land
Dunes
Lake
Bad land
Gypsiferous gravel soils
Gravelly desert and stony waste land deeply eroded phase
Reddish brown soils medium shallow phase
Reddish brown soils deep phase
Brown soils deep phase
Brown soils medium shallow phase
Wadi
0
50
100
km

FIGURE 5



ASHUR SITE

SCHEMATIC DETAILS OF POSSIBLE PROTECTION MEASURES

3. Archaeological Report

by Dr Arnulf Hausleiter

REPORT ON THE UNESCO ASSESSMENT MISSION TO IRAQ

(17TH TO 29TH NOVEMBER 2002)

FOR THE EVALUATION OF THE IMPACT OF THE MAKHOOL DAM PROJECT ON THE SITE OF ASHUR AND THE ARCHAEOLOGICAL SITES IN THE RESERVOIR AREA

January 2003

Dr Arnulf HAUSLEITER
Berlin

The Carsten Niebuhr Institute of Near Eastern Studies
University of Copenhagen

Table of content

1 Introduction

1.1 General situation

Due to the construction of the Makhool Dam some kilometers upstream of where the river Tigris breaks through the mountain chains of Jebel Makhool and Jebel Hamrin, an area of more than 45 km^2 will be inundated by a future reservoir. Accordingly, the dam is aimed at reserving "*more than three billion cubic meters of water which is the minimum requested level for the agricultural and humanitarian use*" (Ministry of Culture 2002: 1). At the time of writing, construction work on the dam is ongoing, and it is planned to flood the area in the first quarter of the year 2006 (Ministry of Culture 2002: 2). The expected and calculated flooding level of the reservoir (in order to fulfill the needs indicated above) is c. 156 m above sea level. In the future area of the Makhool Dam reservoir numerous villages, regional roads, undisturbed landscape areas and areas used for agriculture are located. Furthermore there are at least 63 archaeological sites (Minsitry of Culture 2002: 3; cf. Shakir 2002b), among them the site of the ancient Assyrian capital Ashur, modern Qal'at Sherqat (**Pl. 1.1**).

In view of the future inundation of the reservoir area, the Iraqi Council of Ministers invited UNESCO and other international organisations for assistance. Objective of this assistance is the help in the planning and implementation of adequate measures for the protection of the site of Ashur and the excavation of the sites to be flooded. As to the site of Ashur, it is the stated intention of the Ministry of Irrigation to build a retaining wall around Ashur (Ministry of Culture 2002: 3). Furthermore, a total of 2 billion Iraqi Dinar was allocated to the initial needs of salvage excavations in the area. At present excavations are carried out by Iraqi teams on several sites.

In August 2002 the Ministry of Culture issued an executive report on the Makhool Dam project and the archaeological site of Ashur (Ministry of Culture 2002). This report contains information on the archaeological aspect of the project, the extension of the future reservoir and the measures to be taken in consideration for the salvage of the sites and the protection of the site of Ashur. The report recognised

- The necessity of an international salvage excavation campaign for the archaeological sites (including the site of Ashur) with highly specialised archaeological missions.

- The study of the best engineering means for the construction of a retaining wall for the site of Ashur.

These two aims formed the objectives of the work of the assessment mission of the UNESCO which visited Iraq in November 2002.

1.2 The UNESCO assessment mission

In order to correspond to he request for assistance, an assessment mission of UNESCO visited the Republic of Iraq from November 17th to 29th on the invitation of the UNESCO National Commission of Iraq. The members of the mission were (**Pl. 2.1**):

Ms. Veronique DAUGE (Amman), UNESCO resident officer for Iraq and Jordan

Dr Lucio CAVAZZA (Rome), civil engineer and hydrologist

Dr Arnulf HAUSLEITER (Berlin), Near Eastern archaeologist.

With one day delay, the mission arrived in Baghdad on November 18th. The mission left Iraq on November 28th. The visiting programme was designed by the State Board of Antiquities and Heritage, Baghdad (SBAH). As to the objectives of this part of the mission was divided in three parts:

- Meetings in Baghdad with members of the the State Board of Antiquities and Heritage and the Minister of Education. Preparation of the visit of the salvage area.
- Visit of the site of the Makhool Dam and selected sites in the future reservoir area. Visit to Ashur.
- Evaluation of the situation at the dam and within the salvage area. Meetings with members of the SBAH and the Minister of Culture.

The site of Hatra which is on the World Heritage List of UNESCO was visited. Other sites which are either in the process of being proposed for the List, such as Ashur, or which have been selected for a nomination (Nimrud, Nineveh, Ukhaidir, Samarra) were visited and studied.

Additional visits were paid to the sites of Tell Harmal and Babylon. Contrary to the schedule, the mission worked on November 26th and 27th at the State Board of Antiquities and Heritage in Baghdad.

The members of the mission were constantly accompanied by Dr Donny GEORGE, Director General of the Department of Research and Studies of the SBAH, and by Ms Hama'il HUSSEIN and Mr Louei' AL-UMARI from the Iraqi National Commission of UNESCO.

Meetings were held with the Minister of Education, H.E. Dr Fahad Salim AL-SHAGRA at the beginning of the mission, and the Minister of Culture, H.E. Mr Hamed Yussuf HAMMADI, at the end of the mission.

There were several meetings and discussions with the Chairman of the State Board of Antiquities and Heritage, Dr Jaber Khalil IBRAHIM who also accompanied the mission during its stay at Ashur. The archaeological director of the Makhool Dam salvage project, Mr Burhan SHAKIR, accompanied the mission during its visit to the future reservoir area and selected sites. An additional meeting at the SBAH in Baghdad was held after the return of the mission from the north. There was, however, no meeting with Dr Hana ABD EL-HALIQ, Director General of Excavation and Archaeological Investigation.

The mission's expert for hydrological questions, Mr CAVAZZA, met with the responsible engineer of the dam project, Mr Khaled ZEIDAN, at the office near the dam site itself. Another meeting took place in Baghdad with Mr Mazen AL-HASSAN and Mr Salah BEZIRGAN from the Minstry of Irrigation. However, information contributing to the solution of the problems concerning archaeological salvage strategies for the site of Ashur was not given to the mission.

1.3 Objectives of the archaeological part of the mission

Due to the request of assistance and in accordance with the conclusions drawn in the executive report, UNESCO appointed the present author as archaeological expert. According to the contract, the work assignment for the archaeological expert of the UNESCO assessment mission to Iraq consisted of the following objectives:

(1) To make an assessment of the archaeological areas which will be affected by the construction of the Makhool dam in Iraq, in particular of the site of Ashur.

(2) Present a list of sites, rating their priorities of importance, dimensions etc. affected by the construction of the dam.

(3) Propose possible salvage measures for the preservation of the above sites.

1.4 Working Conditions

The archaeological colleagues of the SBAH were extremely helpful and cooperative in the matter of this part of the mission, in particular Dr IBRAHIM, Dr GEORGE and Mr SHAKIR. Their assistance made our stay very pleasant and certainly contributed to its success.

The meetings with the Minister of Education and the Minister of Culture were characterised by a fruitful discussion about the objectives of the mission and future activities, including those parts of the mission which were not achieved during the visit.

2 Methods and results of the mission

2.1 State of information and methodology of the visits

On November 21st the mission left Baghdad by car in order to visit the area of the Makhool Dam reservoir. After an overnight stay in Mosul, the site of Ashur was visited for one day on November 22nd.

The reservoir area

According to the available information, there are 61 archaeological sites located in the Makhool Dam reservoir area (Ministry of Culture 2002: 2). The total of these sites is recorded in a report compiled by Mr SHAKIR on behalf of the State Board of Antiquities and Heritage based on visits to the sites and available archaeological information. At the time, the report was available in Arabic. In the meantime there is an English version of it. The numbering of the sites in the report is used also in the present document.

During the course of UNESCO mission, two additional sites were discovered in the reservoir area. Thus the total of sites is now 63 (see below). A total of six sites were visited and inspected on November 21st, all of them located in the area east of the Tigris river. These were

- Tell al-Faras (no. 3)
- Khirbet es-Sin (no. 6)
- Tell Farha (no. 11)
- Tell al-Nol (no. 18)
- Tell Dbes (no. 26)
- Tulul al-Aqr (no. 45)

On three of the visited sites archaeological excavations by Iraqi expeditions were ongoing (nos. 11, 18 and 45). At one site excavations had been finished (no. 3); two sites were so far unexcavated (nos. 6 and 26). On-site, the field director of the project, Mr SHAKIR, explained work and results of the archaeological activities. At some of the sites photographic recording was carried out (slides and digital images). In the excavation house of the SBAH at Medinat al-Zab some ceramic artefacts were observed, in addition to those

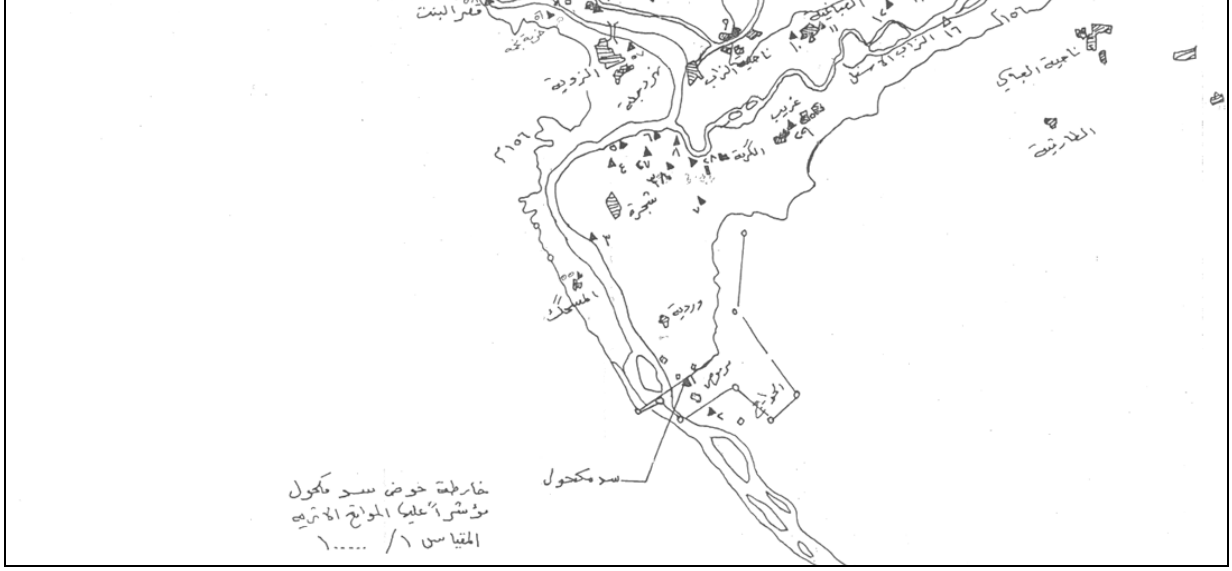


Fig. 1: Map of the Makhool Dam reservoir area
(Source: State Board of Antiquities and Heritage of Iraq)

On the occasion of the Baghdad meeting additional information about all sites presently known in the reservoir area was given, concerning

(1) Period of occupation
(2) Type of remains
(3) Size
(4) State of archaeological exploration
(5) State of preservation

The above-mentioned report of Mr SHAKIR and an area plan of the reservoir indicating the location of 61 sites was handed over to the mission. The SBAH is in possession of a set of high-resolution satellite images of the dam area taken in August 2002, which was provided by the Italian expedition to Iraq. It was, at this point, not possible to study the images in detail. However, it is clear that the quality of the images allows the elaboration of a detailed map of the reservoir area.

The site of Ashur

The day of November 22nd, the mission stayed at the site of Ashur, modern Qal'at Sherqat (**Pl. 2.2**), the seventh site in the reservoir area visited by the mission (no. 61). In the presence of the Chairman of the SBAH, Dr. IBRAHIM, and Dr GEORGE, Ms HUSSEIN and Mr AL-UMARI, the local field archaeologists explained the ongoing work of the Iraqi salvage expedition, which presently concentrate on four areas in the 'New City'. Further on, several excavation trenches of the regular Iraqi excavations were visited. The same goes for the ziqqurrat, some of those remains excavated by Walter ANDRAE almost 100

years ago, i.e. the public buildings in the north of the city, the Parthian palace and the city wall (the soundings of the present German expedition were briefly visited by the author). Particular attention was paid to the eastern and northern edges of the site. The ancient quay wall towards the river Tigris and the known installations at the northern front of Ashur were not studied. Nor was the area of the New Year's feast building visited which is located outside of the walled area. About 20 m south of the house of expeditions a benchmark (155,67 m above sea level) indicates the maximum level of the reservoir. Thus, for the first time, there is a fixed point on the site indicating the absolute height (**Pl. 3.1** and **3.2**).

2.2 Assessment of the archaeological areas affected by the reservoir

The area of the future Makhool Dam reservoir belongs to the most important regions of Ancient Mesopotamia in general and of Assyria in particular. With the inundation of the area east of the Jebel Makhool an essential element of human civilisation will disappear forever. The most famous site threatened by the dam is certainly the first Assyrian capital, Ashur, modern Qal'at Sherqat, which was also the cultic centre of the Assyrian empire. Of *equal importance* is, however, the number of all the other sites which will be covered by the waters of the reservoir and which, except Kar-Tukulti-Ninurta, are smaller than Ashur. The site of Ashur, the other sites and the adjacent landscape of the future reservoir area should be considered together as constituents of the cultural framework of the region (Hausleiter 2002; cf. Lipe 1984: 1).

History of exploration

It is now more than 30 years that regional settlement analysis has changed the archaeological view on Ancient Mesopotamia (Adams 1965; Adams and Nissen 1972). The significant role of the systemic interaction between urban centres and rural settlement clusters contributed to a better understanding of the emergence of states, the economic, social and environmental relations, subsistence patterns and modes of production and trade through time. The question, how the daily life was organised outside the urban context had been addressed for the first time. Between the late 60s of the 20th century and nowadays, a considerable portion of Syro-Mesopotamia has been studied in

terms of a regional approach. To a lesser extent this is valid for the Levant, Anatolia and Iran.

It is known, that the region of Ashur was of eminent importance for the history of Northern Mesopotamia much before the Assyrian periods. Thereby, the fact that the first toponomastic definition of the region - *Subartu* / SU.BIR$_4$ - is to be found in sources from South Mesopotamia may have contributed to the scholarly approach towards the entire region, this is from a southern perspective. But this view is changing because of new results from excavations and surveys in North Syria and the archaeological evidence in the future salvage area.

The exploration strategy of European visitors and travellers which was applied from the mid-19th century AD onwards was much different from the present day approach. In Assyria they started to investigate the capitals, i.e. basically the four cities of Ashur, Nimrud, Khorsabad and Nineveh. These cities contained richly adorned temples and palaces. Much of the discovered materials, especially the limestone sculptures and reliefs as well as carved ivories were brought to the Museums in Europe and abroad. A serious interest in areas surrounding the Assyrian capitals Ashur, Nimrud, Khorsabad and Nineveh was not developed at all. As to the area of rural Assyria, fairly late, during the 70s and 80s of the 20th century AD, more information was obtained. A survey which was conducted by the then State Organisation of Antiquities and Heritage near Fatha was published at the beginning of the 70s (Ibrahim 1972). However, most of the investigations concentrated on the provinces rather than on the Assyrian heartland itself. For the area of North Iraq, the North Jezira Project (Wilkinson and Tucker 1995) and the Eski-Mosul / Saddam-Dam project allowed insight to the material remains in the “Ninevite countryside” (cf. Green 1999). Parallel to this archaeological exploration, the (Neo-Assyrian) cuneiform tablets of the State Archives of Assyria were subsequently edited and studied. Previous work at selected sites outside the core area, such as Tell Khoshi, Tell Rimah or Tell Taya did not lead to an investigation of the sites and their immediate surroundings in terms of an intensive survey.

Since the mid 90s, Iraqi expeditions resumed archaeological activities on sites in the Makhool Dam area, such as, e.g., at Tell al-Naml (no. 59). From 1999 onwards, excavations reopened at Ashur. The Iraqi team has been joined by

the German expedition in the year 2000. Since then, Iraqi teams have started excavations at several sites in the reservoir area. At present, Iraqi excavations at the following 12 (16) sites have been finished:

- Tell Marmous 1 and 2
- Tell al-Faras
- al-Ajamiya 2
- Tell al-Zab
- Tell al-Sabaghia Sharqi and Tell al-Sabaghia Gharbi
- al-Ajamiya 1
- Tulul al-Sidr 1 and 2
- Tell al-Hikna Gharbi and Tell al-Hikna Sharqi
- Khirbet Hanas
- Tell Sdera
- Qasr al-Bint
- Tell al-Naml

At the time of the visit of the UNESCO mission excavations were ongoing at the following 6 (7) sites (from here onwards, excavated sites will be indicated by *italics*):

- *Tell Farha*
- *Tell al-Nol*
- *Tell al-Kawliya 1 and 2*
- *Kh. Jalmoud*
- *Tulul al-Aqr*
- *Ashur*

Excavations are mostly carried out in square areas according to the presence of superimposed archaeological deposits, i.e. layers caused by human activity. Under the general supervision of Mr SHAKIR on behalf od the SBAH, archaeological excavations are locally supervised (and carried out) by specialised technicians. They are assisted by a large number of local workmen from the villages. At Tell Farha, several conveyors were used in order to remove the dump from the excavation trenches. At some sites, such as Kar-Tukulti-Ninurta, specialists for the work with mudbricks, are employed. Since the time of the first German excavations ast Ashur these specialists are called ‘Sherqatis’ according to their home village, as-Sherqat.

Archaeology and history in the light of recent results

From the periods before the urbanisation of Mesopotamia, such as the Neolithic period, the Hassuna-Samarra complex and the Ubaid periods there is presently scanty evidence in terms of an overall picture within the region. Only on some sites occupation of these periods seems to be present (nos. *1, 10.b, 39, 46*). A similar result has been obtained for the adjacent Makhmur Plain at the north-eastern periphery of the reservoir area in the late 40s (el-Amin and Mallowan 1949; 1950). So far, evidence for the Late Uruk period comes only from *Tell al-Nol* (no. 18) (**Pl**. **4.1**).

Information increases for the third millennium BC. The first traces of interaction with adjacent areas can be recognised certainly in the worship figures of the Early Dynastic period (c. 2,800 BC) at the site of *Ashur* and in some architectural elements of public buildings. So far, remains of this period could be identified otherwise at *Tell al-Faras* (no. 3), Tell al-Zab (no. 9), Tell al-Ga'ga'iya (no. 21), Tell al-Zawiya (no. 57) and *Tell al-Naml* (no. 59). In al-Faras and Naml, two "round buildings" were discovered which are attested also in the Hamrin area and, to a less similar degree, in the Khabur triangle of Northern Syria. During the period of the empire of Akkad and especially during the period of Ur III (towards the end of the 3rd millennium BC) contacts increased, since *Ashur* was dependent from the Ur III dynasty and had to pay a certain type of taxes. Apparently, a governor ruled over the city. Remains of this period are so far also present at *Tell Marmous* (no. 1) and *Tell al-Faras* (no. 3).

For the first part of the second millennium BC one focus has been set on the international trading network between the city-state of Ashur and its trading centres in Anatolia, although mainly based on the results from sites in modern Turkey. However, neither the role of Ashur as a "trading platform", nor the function of the smaller sites within the settlement system in the backyard of Ashur had been archaeologically studied. Therefore, it will have to be discussed, whether these sites were involved in the supply of raw material or trading products. Nearby Ashur, there was apparently the residence of the ruler Samsi-Addu (19th/18th century BC) at Ekallatum, the exact location of which is still discussed (Charpin and Durand 1997). After the reign of this king, during a phase of political decline, it was an alliance of Elam and Eshnunna which occupied the area east of the Tigris. According to the textual evidence, several cities, some of them probably in the Makhool Dam reservoir area, were conquered. Whether there are also Old Assyrian remains at *Kar-Tukulti-Ninurta* (no. 45) and at Rassm Hussein al-Abbas (no. 48) will have to be studied further on.

In the mid-2nd millennium, the state of Mittani extended over Northern Mesopotamia. However, what is known about it in this part of Northern Mesopotamia refers exclusively to the site of Nuzi/Yorghan Tepe near Kirkuk and to the "land of Arrapha", the area south of the Lesser Zab. Apart from archaeological investigations at a limited number of sites, such as Tell Mahuz, information concentrates on historical topography and economic relations within the area. The role of Ashur during this period is still not clear. It was apparently conquered by a Mittanian king but had also an independent king list for this part of the second millennium BC. Recently, layers of this period were uncovered by excavations of the German expedition in the northern part of the city (Hausleiter and Herles 2002).

Results from the survey carried out by Mr SHAKIR seem to indicate a large number of sites with Middle Assyrian settlement remains. North of *Ashur*, the city of *Kar-Tukulti-Ninurta* (no. 45) had been established by the Middle Assyrian king Tukulti-Ninurta I at the end of the 13th century BC. After a short exploration by Bachmann in 1914, a German expedition returned to the site in the mid-80s of the 20th century AD. In addition to the substantial remains from the Middle Assyrian period evidence for a Neo-Assyrian occupation was identified. Further archaeological investigations at this place will provide insight into the structure of newly founded and "planned" city - this in sharp contrast to the "grown city" of Ashur. The newly excavated palatial building at this site north of the so-called North Palace shows an extremely elaborated decoration of walls and floors (**Pl. 4.2**). Stamped bricks from this building mention the king Tukulti-Ninurta and his palace. Investigations at the so-called Southern Palace seem to indicate that the history of the building is more complex than previously assumed. A highly elaborated facade was discovered at its northern side. A deep sounding at this spot showed that the foundation of this building is much deeper than of the newly discovered palatial building which apparently has been erected immediately on top of the river terrace conglomerate.

The impact of the rise of the Middle Assyrian empire on the immediate surroundings of Ashur and Kar-Tukulti-Ninurta has not been studied - either archaeologically or according to the textual sources. The same is valid for the Neo-Assyrian period.

As to the identification of ancient toponyms with actual sites in the area, textual sources from various periods furnish only a few place names or names of mountain chains. It is, therefore, hardly possible to obtain a precise location of place names mentioned in the texts, whether in the 3rd millennium BC or the 3rd century AD. On

the relevant maps the area of the Makhool Dam reservoir remains mainly empty until now. Presently, for this region a map similar to the map of the land Arrapha (see above) can not be designed (cf. Fadhil 1983; Müller 1994). The work on the Repertoire Geographique des Textes Cuneiformes for the Neo-Assyrian period is ongoing. Published texts from the Neo-Assyrian State Archives of Assyria did not provide substantial improvement so far.

According to the results of the survey of the Iraqi archaeologists, the number of sites with a Neo-Assyrian occupation seems to be surprisingly limited, even though one would expect a similar development for this part of the Assyrian empire as it could be observed for the Western provinces. At Ashur, private and public buildings of this period have been extensively excavated by the Iraqi and German expeditions.

Only after 612 BC the area was controlled by others than Assyrians. In its northern parts, the Medes may have gained control, even though it is not yet clear how to identify traces of them apart from architecture. Traces of Hellenistic, Seleuco-Parthian and Sasanian remains in this particular area still have to be studied thoroughly, since there are only preliminary observations as far as the archaeology is concerned. There are several sites in the reservoir area with remains of these periods, among them the site of *Ashur*. T. al-Fahil, Maqbarat Shajara, Kh. es-Sin (T. al-Khirba), Umm al-Danabiq, *T. al-Zab*, T. Wadi al-Kurdia wa al-Soura, *T. al-Kawliya*, T. Darwish, T. al-Kardoushia, Kh. Tannur, Kh. Haswa, *Kh. Hanas, Kh. Jalmoud, Qasr al-Bint* and *Khan al-Naml*.

At the junction of the Lesser Zab and the river Tigris, the extended and marked area of the Islamic city of Khirbet es-Sin (Sin Barme) indicates an important settlement. Apparently, there were several watch towers (no. 27.a-b and no. 38) belonging to this place. Surface sherds cover the Parthian, Sasanian and Islamic periods, but the site may well have had an important function in the pre-Parthian periods, due to its strategic position. The transition from the Late Sasanian to the Early Islamic period is hardly known in terms of archaeological artefacts, and further traces may be expected at sites with traces identified as Sasanian and/or Islamic: T. al-Fahil, Maqbarat Shajara, Umm al-Danabiq, *T. al-Zab*, *T. al-Ajamiya 1*, T. Wadi al-Kurdia wa al-Soura, Kh. A'isha, *Tulul al-Sidr*, Maqbarat al-Atrak, T. Dbes, *T. al-Kawliya, T. al-Hikna*, T. al-Kardoushia, T. al-Msaqra, Kh. Tannur, *Kh. Jalmoud, Qasr al-Bint* and *Khan al-Naml*.

Attested periods

Since most of the sites have been surveyed and only a minor part excavated a generally valid judgement on the chronology of occupation in the Makhool Dam reservoir area is rather premature (**Fig. 2**). Nevertheless, the attribution to certain periods by means of surface material, mainly pottery, is a well established and useful procedure in order to elaborate a settlement history within a defined region. On the other hand, in this particular area of Mesopotamia the knowledge of the ceramic sequence through time is still rather scanty (see, however, Schmidt 1999 and Hausleiter 1996). At some sites, the archaeological excavations confirmed already the existing dating of a site, in other cases they provided additional information.

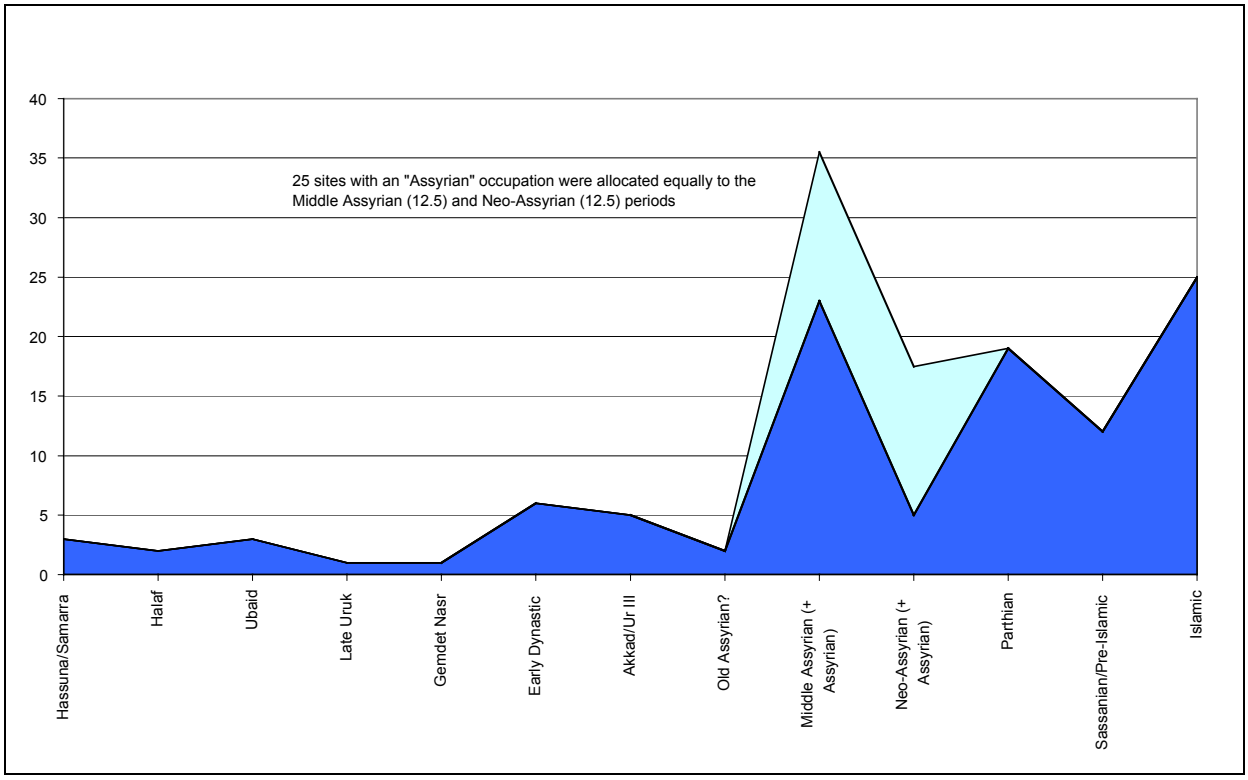


Fig. 2: Periods represented at sites in the Makhool Dam reservoir area

A first marked increase of attested occupation can be registered for the Early Dynastic and Akkad / Ur III (?) periods from the mid to the end of the 3rd millennium BC. A significant Old-Assyrian occupation has not been recognised on sites in the area. It might be too early to judge whether settlement during this period was restricted to urban centres such as, e.g., Ashur, even though admittedly the pottery from this period is rather well identifyable. Doubtless, there is a marked increase during the Middle-Assyrian period. However, the image for this period and the Neo-Assyrian periods is

obscured by the fact that on 25 sites an “Assyrian” occupation was identified. Since this term may apply for both, Middle and Neo-Assyrian periods, we decided to allocate the value of 12.5 to each of them. From the North Jazira project it is known that there was a remarkable increase from the Middle to Neo-Assyrian periods (Wilkinson and Tucker 1995: 192, Fig. 50) but this could also refer to the circumstances in this specific area which lies clearly within the zone of rainfed agriculture. In the Parthian period there is no visible decrease in occupation. Less secure is the attribution of pottery to the Sasanian period. Discussing an increasing occupation during the Islamic period one should keep in mind that a differentiation between phases within the “Islamic” period is required in order to obtain a reliable picture.

Whether there is a confirmation for this preliminary graph which allows conclusions on economy, demography, administration and agricultural needs will be analysed after the intensive and extensive research in the area has started.

Size

According to the site report (Shakir 2002a), it is possible to give an approximate size for a total of 42 sites, among them *Ashur*. The size of *Kar-Tukulti-Ninurta* was not indicated but it is by far the largest site of the area. The expedition working at the late 80s at the site showed that the originally estimated size of 62 ha pertains to the inner area of the site. The minimum extension of the site is 240 ha (Dittmann et al. 1990: 165-166).

The graph below (**Fig. 3**) is based on the calculated surface based on the data given in the report. The size may vary from site to site since the individual shape of the mounds was not indicated. For other sites there was the information about the diameter. These sites are not included in the graph for the same reason. It should be underlined that the graph represents only the size of sites as visible on actual surface without further examination. It cannot be compared with those graphs indicating the settlement hierarchy during a given period according to the recorded surface extension.

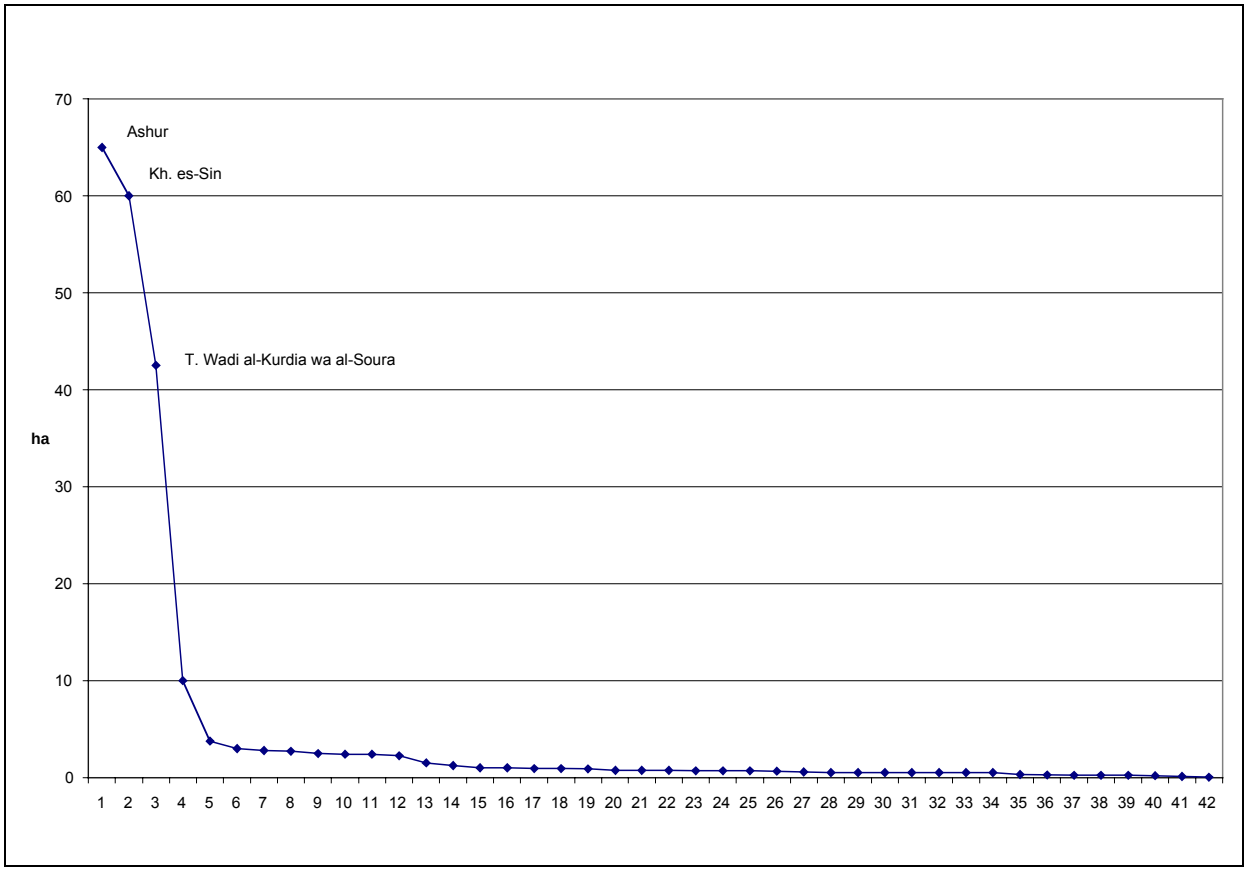


Fig. 3: Extension of selected sites in the Makhool Dam reservoir area (based on Shakir 2002a)

Apart from the five sites with a very large extension, the majority of recorded sites is of limited extension. After *Kar-Tukulti-Ninurta* follow *Ashur* and Khirbet es-Sin. About 30% smaller is T. Wadi al-Kurdia wa al-Soura with 42.5 ha. At a considerable distance follows T. Haijal Saghir with an extension of 10 ha surface. With Maqbarat Shajara (3.75 ha) the number of medium sized sites starts. It is followed by a cluster of seven sites with an extension of between 2.24 and 3 ha. Already of considerably smaller extension is the site of T. Maqbarat al-Fayadh (1.25 ha) which is followed by five sites of about 1 ha size. Between 1 ha and 0.5 ha there are 8 sites, most of them around of a 0.7 ha surface. Slightly smaller (0.5 ha) is another cluster of 7 sites. A third or a quarter of a hectar is the size of six sites, whereas the smallest sites have an estimated surface of 0.13 ha and 0.04 ha respectively.

State of preservation

According to the report and additional information provided by Mr SHAKIR, only seven sites are considered not damaged by post-depositional activities: Kh. as-Sin (no. 6) with T. Dhahrat Sa'id (no. 27.a-b) and Tell (no. 38), Kh. Hazza' (no. 51) and al-

Jaharis (no. 63). The majority of the sites in the Makhool Dam area are reportedly damaged by agricultural activity, irrigation measures, modern housing, cemeteries, removal of earth, erosion or flooding. Four sites are completely destroyed, and it does not seem that any excavation is possible: T. al-Kedish 2 (no. 31), Kh. al-Mashak (no. 55), Kh. Nijma (no. 56) and T. al-Zawiya (no. 57). The state of preservation of some of the site is not recorded, since archaeological excavations were carried out: *T. al-Ajamiya 1* (no. 19), *Tulul al-Sidr 1-2* (no. 24), *T. Sdera* (no. 46), *Qasr al-Bint* (no. 58) and *T. al-Naml* (no. 60). Clandestine / irregular excavation are mentioned for the site of Kh. Haswa (no. 41). In respect to the graph above, it should be noted that the state of preservation and the presence of modern housing on or around archaeological sites may have effects on the estimate of the orginal size of the occupied area since deposits may have been covered or removed. The site of *Tell al-Nol* is surrounded by cultivated fields which through the years have extensively damaged the margins of the original site. It is possible that under the area of the present fields archaeological deposits of preceding periods are present.

Conclusions and prospects

Although many of the archaeological sites within the Makhool Dam area indicate an Assyrian occupation it should be underlined that the region next to, i.e. mostly east of the river Tigris played an important role well before and after the Assyrian periods. Recent excavations contributed considerably to a changing view on the area during the prehistoric periods, and it is expected that future archaeological activities in this area will do this for all the periods present on the sites.

The relevance of the Makhool Dam reservoir area for the archaeology and cultural history of Northern Mesoptamia has been confirmed by the first results from the Iraqi excavations: The presence of Late Uruk period pottery (four lugged jars and so-called bevelled rim bowls) at Tell al-Nol and the occurrence of “Ninevite 5”-pottery together with sherds of the “Scarlet Ware” on the site of Tell al-Naml belong to the most outstanding results obtained so far. Third millennium BC occpuation (Akkad and/or Ur III) is attested at Tell al-Faras, whereas early second millennium remains could be covered by Middle-Assyrian deposits which area attested on numerous sites. A high density of sites from this period would fit into the general framework. Whether the relatively small quantity of Neo-Assyrian sites in the area (Shakir 2002b) has to be explained with the shift of political power to the north or with the limited agricultural potential of the regions for delivering grain to the Assyrian capitals will have to be studied in due course. Research on the periods after the fall of the Assyrian empire will help to establish a stable basis for the material culture on a regional scale.

Together with the remains of the "material culture", further cuneiform texts from the sites in the area will shed a new light on the history of the region. So far, the new excavations revealed cuneiform texts from the Middle- and Neo-Assyrian periods at the sites of Tell al-Faras (nA), Tell Farha (mA) and Tulul al-Aqr (mA). They are presently under study or in preparation for publication. During recent years, the results from excavations in provincial Northern Syria exemplified very well both, the impact of "peripheral" regions on the centre (and vice versa) and the scale of regional history within the overall historical view.

Since most of the sites are already damaged by the impact of modern civilisation immediate action is required also from this point of view.

By means of up-to-date methodology and modern technical equipment a concentrated analysis of the Makhool Dam area will contribute to a deeper understanding of the Assyrian core area from the Neolithic to the Islamic periods. Such an analysis should include the integrated application of

- archaeological excavations
- intensive analysis of the site's surrounding area
- further systematic on-site survey activities
- off-site survey and excavation activities
- remote sensing techniques

Similar to existing salvage projects in Iraq and elsewhere such a combined approach helps to intensify the degree of analysis by using different methodologies. Such an approach should, firstly, lead to a better archaeological understanding of the cultural matrix on a local and regional level. On a supra-regional level the changing role of this particular zone of Northern Mesopotamia concerning its relationship to Babylonia and other adjacent regions to the west, north and east will be analysed. And in this context its function as a bridge and motor for cultural contacts, transfer and exchange will become a further research objective.

2.3 Priority list of endangered sites

The assessment of the archaeological areas affected by the reservoir underlines that the entire area of the future reservoir is of eminent importance for the understanding of Ashur and the Assyrian hinterland. This pertains not only to settled areas on sites

but to the entire *archaeological landscape* of the area, that is communication networks between settlements (streets, roads, hollow-ways), patterns of land-use and irrigation, traces of nomads and pastoralists etc. in the known archaeological periods. Therefore, a modern archaeological approach cannot be restricted to the mere excavation of a number of sites. A regional analysis should combine intensive on-site research and extensive off-site analyses likewise. With this in mind the creation of a priority list of endangered sites should not be overestimated. On the other hand, in the prospect of the envisaged flooding of the area, it might also help to set up specific salvage measures for those sites considered as very important.

The priority list of endangered sites given below is based on

- the map of the Makhool Dam reservoir area
- the visit of seven sites in the reservoir area
- the survey report of Mr Shakir containing 61 sites (Shakir 2002a)
- discussion about the sites in the area with Mr SHAKIR in Baghdad (Shakir 2002b)
- information about the time schedule of the flooding and the intended maximum level of the reservoir (c. 156 m)
- archaeological publications

There are 7 sites on the map which are located west of the Tigris. The overwhelming majority of the sites is situated at the eastern side of the river. During the stay of the mission, two additional sites were identified in the reservoir area, and it is expected that other sites will be discovered in due course of the project. At the time of writing, the total of sites is, therefore, 63. Since Tell al-Hawaij (no. 2) is located outside the reservoir area, the total of site is 62.

Several sites consist of two or more units. These are *T. Marmous* (no. 1.a-b), Umm al-Danabiq (no. 8.a-b), T. as-Sabaghiya (no. 10.a-b), *Tulul al-Sidr* (no. 24.a-c [the fourth Tell of this place lies outside the reservoir area]), *T. al-Kawliya* (no. 28.a-b), T. Ghraib (no. 29.a-b), T. Hikna (no. 30.a-b), Kh. Tannur (no. 40.a-d), *Kh. Hanas* wa Hayiss (no. 42. a-b) and T. I'ittan (no. 50). Three additional Tells are attested for the site of Khan al-Naml (no. 60). In some cases two sites with the same name are already listed as independent entries, such as T. al-Kedish 1 and 2 (no. 14 and 31). In one case, the report mentiones an additional site without number next to a registered site (T. Kh. Azawi, next to no. 35). The city of Kh. es-Sin (and three mounds identified as watch towers [T. Dhahrat Sa'id, no. 27.a-b, and Tell, no. 38] are counted as one entry.

Based on this site count, the theoretical number of sites (tells) in the salvage area is 77. Further research at the spot will change the number of sites and shed light on whether single units belong together or not. Therefore, in order to avoid any confusion, site name and number as given by the SBAH will be used as reference frame throughout this report. When necessary, the single units are counted separately and are given in brackets.

Based on the available information, three categories of priority for sites were established.

- very important: 1
- important: 2
- normal: 3

As criteria for the categories served the extension of the site, periods represented, potential for the local and regional material culture and cultural history, accessibility / visibility of artefacts or architectural remains and location. Some of the sites were not attributed to one of the categories.

Priority List of sites in the Makhool Dam reservoir area			
Category 1: Very important			
No.	**Site Name**	**State of exploration**	**State of preservation**
1.a-b	*T. Marmous*	excavation finished	
6	Kh. es-Sin (T. al-Khirba)	Unexcavated	apparently not damaged
10.b	*T. al-Sabaghia Gharbi*	excavation finished	damaged (agriculture)
18	*T. al-Nol*	excavation ongoing	damaged (agriculture / irrigation)
20	T. Wadi al-Kurdia wa al-Soura	Unexcavated	damaged (agriculture)
21	T. al-Ga'ga'iya	Unexcavated	damaged (cemetery, village, erosion)
39	T. Kh. al-Sawwan	unexcavated	damaged (agriculture)
42.a-b	*Kh. Hanas wa Hayiss*	excavation finished	damaged (agriculture, village)
45	*Tulul al-Aqr*	excavation ongoing	damaged (agriculture, village)
46	*T. Sdera*	excavation finished	
48	Rassm Hussein al-Abbas	unexcavated	damaged (agriculture, cemetery)
54	T. Haijal Saghir (Shahad)	unexcavated	damaged (cemetery)
59	*T. al-Naml*	excavated finished	
60	Khan al-Naml	unexcavated	damaged
61	*Ashur*	excavation ongoing	damaged
Category 2: Important			
No.	**Site Name**	**State of exploration**	**State of preservation**
4	T. al-Fahil	unexcavated	damaged (agriculture, cemetery)
5	Maqbarat Shajara	unexcavated	damaged (cemetery)
7	*al-Ajamiya 2*	excavation finished	slightly damaged
8.a-b	Umm al-Danabiq	unexcavated	damaged (agriculture)
9	*T. al-Zab*	excavation finished	damaged (village)
10.a	*T. al-Sabaghia Sharqi*	excavation finished	damaged (removal)

11	*T. Farha*	excavation ongoing	damaged (agriculture, cemetery)
12	T. al-Sidayer	unexcavated	damaged (agriculture)
13	Maqbarat Shmait	unexcavated	damaged (cemetery)
14	T. al-Kedish 1	unexcavated	damaged (agriculture, cemetery, village)
15	T. al-Khan	unexcavated	damaged (agriculture)
17	T. al-Numaisa	unexcavated	damaged (agriculture)
19	*T. al-Ajamiya 1*	excavation finished	
22	Kh. Turki	unexcavated	damaged (agriculture, removal)
23	Kh. A'isha	unexcavated	damaged (agriculture)
24.a-b	*Tulul al-Sidr*	excavation finished	
24.c	Tulul al-Sidr	unexcavated	damaged (cemetery)
25	Maqbarat al-Atrak	unexcavated	damaged (agriculture, cemetery)
27.a-b	T. Dhahrat Sa'id (to no. 6)	unexcavated	
28.a-b	*T. al-Kawliya*	excavation ongoing	damaged
29.a	T. al-Ghraib 1	unexcavated	damaged (cemetery)
29.b	T. al-Ghraib 2	unexcavated	damaged
30.a-b	*T. Hikna*	excavation finished	damaged (agriculture, cemetery)
31	T. al-Kedish 2	excavation impossible	destroyed (village)
32	T. Qrei'a	unexcavated	damaged (village)
33	T. Umm al-Arabid	unexcavated	damaged (village)
34	T. Darwish	unexcavated	damaged (removal, village)
35	T. Maqbarat al-Fayadh	unexcavated	damaged (cemetery, removal, village)
	T. Kh. Azawi	unexcavated	damaged (village)
36	T. al-Kardoushia	unexcavated	damaged (cemetery, removal)
40.a-d	Kh. Tannur	unexcavated	damaged (agriculture)
41	Kh. Haswa	unexcavated	damaged (agriculture)
44	*Kh. Jalmoud*	excavation ongoing	damaged (agriculture)
47	T. Isbeh al-Sufli	unexcavated	damaged (agriculture, removal, village)
50.a-d	I'ittan	unexcavated	damaged (agriculture)
51	Kh. Hazza'	unexcavated	
52	Kh. al-Hamidiya	unexcavated	damaged (removal, village)
53	Kh. Haijal al-Kabir	unexcavated	damaged (removal, village)
57	T. al-Zawiya	excavation impossible	destroyed (agriculture)
58	*Qasr al-Bint*	excavation finished	
62	Tell al-Agara	unexcavated	damaged
Category 3: Normal			
No.	**Site Name**	**State of exploration**	**State of preservation**
16	T. al-Baidha	unexcavated	damaged (erosion)
26	T. Dbes	unexcavated	damaged (village)
37	T. al-Msaqra	unexcavated	slightly damaged
38	Tell (to no. 6)	unexcavated	
43	Kh. Dalli	unexcavated	damaged (removal, village)
49	T. Saleh al-Dakhil	unexcavated	damaged (removal, village)
55	Kh. al-Mashak	excavation impossible	destroyed (agriculture, removal)
56	Kh. Nijma	excavation impossible	destroyed (removal)
63	Al-Jaharis	unexcavated	

Outside the reservoir area	
No.	**Site Name**
2	al-Hawaij
24.d	Tulul al-Sidr

Discussion

15 (17) sites have been attributed to **category 1** ("very important"). At five of them, the Iraqi teams finshed excavations, three sites are being excavated (one of them,

Ashur, with the participation of a foreign expedition) and seven of them are unexcavated. Five of them have been visited by the mission, one of them previously by the present author. Most prominent in significance and size are certainly the multi-period site of Qal'at Sherqat/*Ashur* and the city of *Kar-Tukulti-Ninurta*/Tulul al-Aqr for the Middle-Assyrian (and Neo-Assyrian) periods. Khirbet es-Sin is most relevant for the Islamic and pre-Islamic, i.e. Parthian and Sasanian, periods (to this site, at least three watch towers have to be added, which entered the site list as sites of "importance" [nos. 27.a-b and 38]). These are the most extended settlements of the reservoir area. The next site of a considerable extension is Wadi al-Kurdia wa al-Soura, another site with an occupation from the Parthian to Islamic periods with a promising potential. At Ashur numerous texts from Old- to Neo-Assyrian periods have been discovered during the last years. Most recently ca. 30 tablets were found at the site of Kar-Tukulti-Ninurta.

Significant prehistoric remains are attested from T. Kh. al-Sawwan and *Sdera*. Similar is valid for *T. al-Sabaghia Gharbi*. Traces of the Late Uruk expansion to the north are so far only attested at *Tell al-Nol*, although apparently without the context of a settlement. The mound has been entirely excavated, and additional traces of earlier periods may only be discovered under the surface of those areas presently used for modern agriculture.

Excavations on sites with 'round buildings' have been finished at the impressive Early Dynastic sites of *Tell al-Faras* and *Tell al-Naml* both of them located in the immediate vicinity to the river Tigris. Whereas the first of them offers a pottery sequence from the ED to the Akkadian (Ur III?) period, the latter one yielded also sherds of the 'Ubaid period and a Middle Assyrian graveyard. Apart from their excellently preserved architectural structures, these sites will contribute to the pottery sequence of the region. The same is valid for *Tell Marmous* (1 and 2) with substantial deposits from the 3rd millennium BC. Also the site of Tell al-Ga'ga'iya shows significant remains of the Early Dynastic period. Rassm Hussein al-Abbas is labelled as 'Assyrian' and may reveal remains of the Old Assyrian period. Substantial settlements of the Middle-Assyrian period are attested or to be expected at *Khirbet Hanas wa Hayiss* and Tell Haijal Saghir. An interesting Parthian complex is registered for the site of Khan al-Naml.

As to **category 2** ("important"), it forms the largest group of sites. 38 (53) sites, including the three presumed watch towers of Khirbet es-Sin. On 7 (10) sites archaeological excavations by Iraqi teams have been finished, 3 (4) sites are currently

excavated. A total of 27 (34) sites are unexcavated. Only one site of them has been visited by the assessment mission. Although the importance of ancient Near Eastern sites can be defined by its size and height, it is not the only reliable criterion. In fact, the majority of sites range between 0.5 and 1 ha extension, but there are several smaller sites and a number of sites with a surface of 3 ha (see above **Fig. 3**). If there is the impression that many of the sites in this category apparently belong only or mostly to the Middle-Assyrian period, one should take in consideration that especially at smaller sites close to fields, villages, roads and irrigation measures or covered by modern housing or modern cemeteries a greater percentage of the substance is either damaged, destroyed or inaccessible. Thus, the substantial presence of Middle-Assyrian remains may have covered (and may still cover) remains of preceeding periods. In this respect, the example of *Tell al-Nol* should be recalled where the Late Uruk period pottery had been discovered during the excavation but not by means of the surface survey. On the other hand, the unique chance to study a number of sites from the Middle-Assyrian region in this particular region and this density, gives a high individual importance to each of these "smaller" sites.

A general statement on the sites from this group must remain preliminary. At the present state it seems that occupation does not start earlier than the mid-2nd millennium BC (but this impression may change). Excavations of the Iraqi teams focussed in part on sites with several periods represented: *Tell al-Zab*, *Tell al-Kawliya*, *Tell al-Hikna*, *Khirbet Jalmoud*, *Qasr al-Bint*. The so far unexcavated sites Tell al-Fahil, Maqbarat Shajara, Kh. A'isha, Tell Darwish, Maqbarat al-Atrak, Tell Kardoushia, Khirbet Tannur, Khirbet Haswa and al-Zawiya traces of several periods of occupation are present.

An 'Assyrian' occupation (or sherds) is attested at 31 (37) sites. Among these sites, it was possible to identify a considerable portion of sites as Middle-Assyrian. 14 (16) sites show surface material to be attributed to this specific period, which saw the growth of the Middle-Assyrian empire. Since there is only a few excavated rural sites in Assyria proper from this period, it is expected that excavation of these sites will substantially contribute to the understanding of non-élite settlements. Furthermore, new aspects of site-to-site relations in the Assyrian countryside and the interchange between the rural and urban sites will be discussed based on the material from these sites. The analysis of archaeological remains and textual evidence will have to be treated together.

So far one Middle-Assyrian text has been discovered at *Tell Farha*, another tablet of this period comes from at *Tulul al-Sidr*. Whether these sites were all single period sites (at least for the time of the Assyrian occupation) will have to be established by detailed on-site research. Middle- and Neo-Assyrian traces are attested for Tell al-Fahil and Kh. A'isha. Neo-Assyrian remains were identified at Tell Kedish 2. For the (-pre-) Parthian and Sasanian periods, the number of 8 (13) sites is comparably limited. Sasanian and / or Islamic artefacts are present at 10 (16) sites. Only Tell al-Ajamiya 1 and Tulul al-Sidr (no. 24.c) show exclusively Islamic remains.

9 sites are listed in the **category 3** "normal". All of them are unexcavated, at two sites it is considered impossible to carry out excavations. Generally, they are rather small and show an 'Assyrian' occupation. Exceptions are T. Dbes and T. Msaqra ('Assyrian' and Islamic) and Tell (no. 38) which belongs to the site of Kh. es-Sin. At Kh. Nijma there were no surface finds. Information on sites without recorded surface finds (in the report) was added by Mr SHAKIR

Conclusions

At the end of this priority list, four groups of sites can be recognised

- Substantial multi-period sites with third millennium remains
- Extended cities
- Smaller sites with a limited range of deposits (mainly [Middle-]Assyrian)
- Small single (?) period sites

It is clear that especially those sites listed in the first two groups require the most concentrated effort of fund-raising, exploration strategy, decision-making, equipment, recording methods and man-power. In view of the inundation by the reservoir in the year 2006 it is more than justified, to attribute these sites a high priority. However, as stated before, the entire amount of smaller sites forms an indispensable part of the cultural heritage of equal value. If they are classified as "less important" in this list, it pertains mainly to the expected effort for their exploration. Even though at this stage an archaeological ranking of sites in the settlement-system(s) of the reservoir area remains preliminary, the listing will have to serve as tool for the development of archaeological salvage strategies and their implementation.

2.4 Proposed archaeological salvage measures

The archaeological salvage measures for the site of Ashur and the remaining sites within the Makhool Dam reservoir are proposed based on the information that the flooding of the area will be completed in 2006 as scheduled. This means that for the area and most of the sites there remain less than four years for the archaeological exploration. The degree of archaeological exploration depends partly from the duration of stay of archaeological expeditions to the site.

The Iraqi authorities declared that an international appeal would be launched soon inviting archeological expeditions and specialist from abroad. Further on, similar to previous salvage campaigns in the country, infrastructure and equipment for all expeditions involved in the salvage project will be offered. This is in particular

- Housing for the expeditions
- Human working forces and their salary
- Equipment (picks, wheel-barrows, shuffles etc.)

Transportation to, from and within the country, specific equipment and special tools as well as living costs of the team members would have to be raised by the expeditions themselves.

2.4.1 Ashur

Since no definite decision on the specific construction of a retaining system for the archaeological site of Ashur has been made yet, it is not clear which parts of the site and its monuments will be affected by the construction of a retaining wall. Therefore, it is only to a certain degree possible to discuss and develop salvage measures for the site.

Recognising the stated interest of the State Board of Antiquities and Heritage as expressed in the executive report launched in August 2002 and during the time of the mission, it seems, however, that the construction of a retaining wall is the favoured solution. Even though there is the option of a retaining wall to be constructed separated from the site - as soonly to be referred to in semi-academic journals, it seems that a more cost-effective solution on the site itself is presently taken in consideration by the authorities. If such a wall or parts of it are constructed on the site, it cannot be excluded that extended parts of the site at the northern and eastern margins may be damaged by the construction of the wall and its foundations. It is clear that any construction on the site will have consequences for the salvage strategy for the site. This pertains to archaeological exploration techniques and methods as

well as to the conservation of monuments or single contexts and their transportation to museums.

Under the present conditions, i.e. the ongoing construction of the Makhool Dam, there are theoretically three options for the site of Ashur.

1) No retaining wall will be constructed. The site will be flooded and infiltrated from 2006 onwards.
2) A retaining wall will be constructed separated from the site before the flooding starts in spring 2006.
3) A retaining system will be constructed on-site, located on the eastern and northern margins before the flooding starts in spring 2006

On the following pages the possible salvage measures for the site of Ashur will be discussed for each of these options.

(1) Without retaining wall

Although this option is considered merely theoretical, a salvage strategy for the site will be discussed briefly as well. It is definitely the worst-case scenario, because the site and its monuments will be destroyed forever during the coming years. Visits to several archaeological sites affected by flooding and infiltration elsewhere in the Middle East underline that the process of destruction of archaeological sites is proceeding quickly once the waters have arrived, even though it is impossible to predict the time when any archaeological activities will have to come to a definite end. The main factors for the destruction of anthropogenic deposits are the change of the water level, a growing moisture, the continuing movement of the water towards the remaining structures and deposits, the immediate growth of many sorts of plants and effects of infiltration which together lead to a destabilisation of the entire site.

Without retaining wall the site will be partly flooded at its lower parts in the New City (**Fig. 4**), even though the exact area cannot be defined precisely, since none of the available (archaeological) maps is either detailed enough or shows contour lines coinciding with the new benchmark. At its eastern and northern margins the site and its archaeological deposits will be exposed to infiltration at a length of more than 2 km.

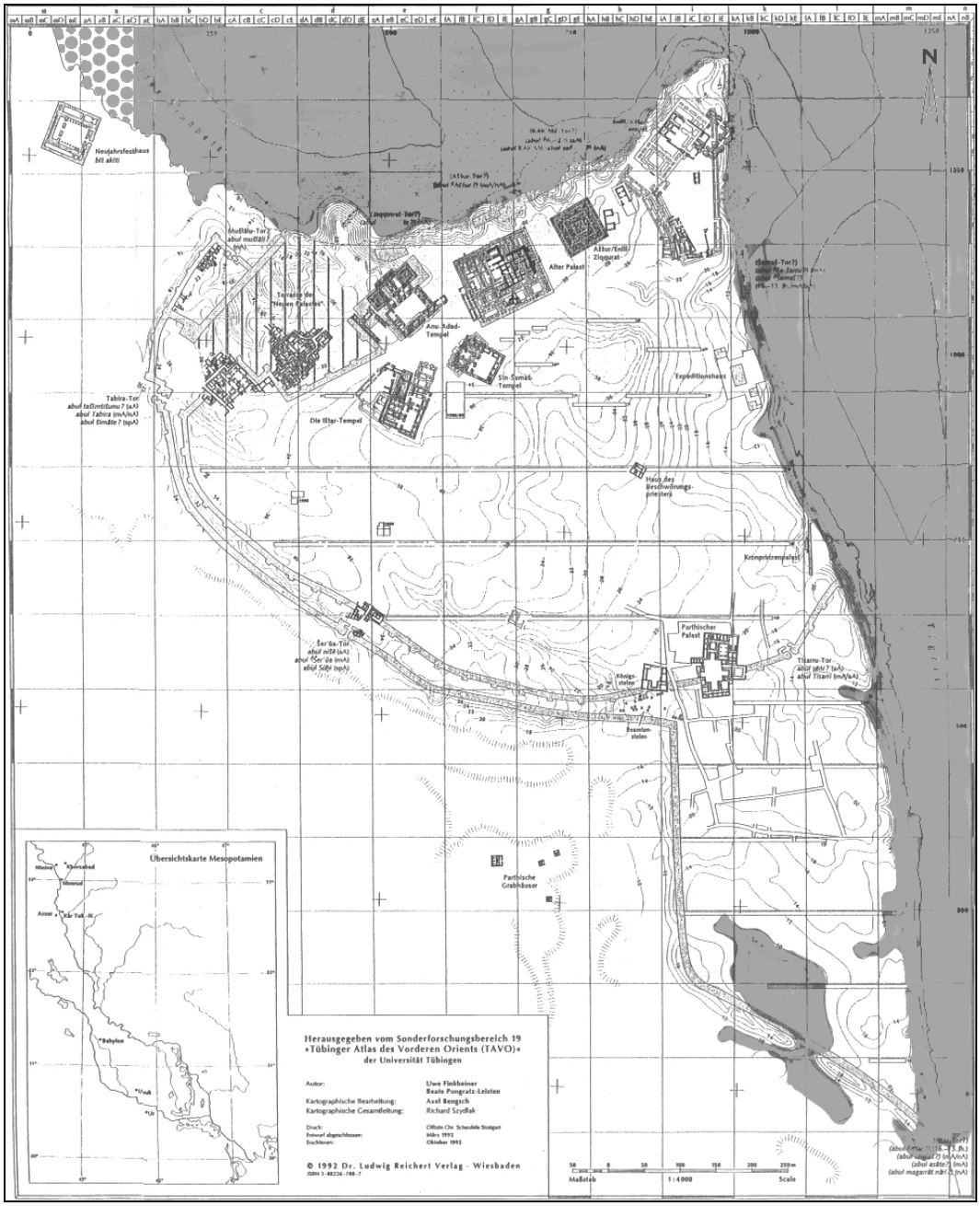


Fig. 4: The site of Ashur and its potentially flooded areas
(Map after Finkbeiner and Pongratz-Leisten 1992)

It must be stressed, that only without retaining wall the entire site of Ashur will have to be considered as rescue area. In this case the main technique of exploration will be archaeological excavations combined with any possible remote sensing technique for the study of unexcavated areas on the site and its immediate surroundings. A concentrated rescue operation should cover areas within the city walls and outside, such as, e.g., the area of the New Year's festival building to the NW of the city, but also other zones. Apart from exposing ancient structures and monuments, the thought of conservation and protection should not be abandoned. One should take in consideration the coverage of excavated areas with earth before the areas will be

flooded. Objects and contexts of specific importance should be transferred from the site to museums. Restoration and conservation measures pertain exclusively to objects removed from their context.

Finally, a careful and systematic study of the slow decay of the archaeological site of Ashur should be taken in consideration in order to get a better understanding of the disappearance of archaeological sites.

The proposed action plan for scenario (1) is schematically designed in the following table.

Time schedule and working programme for rescue excavations at Ashur (without retaining wall)

Year	Measure	Location / task
2003	Archaeological excavation	Southern city; Quay along the Tigris river
	Geophysical Survey	Unexcavated areas in the Southern city and beyond
	Surface Survey	Outside the city wall (South) and the New Year´s festival building area
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts
	Publication	Preliminary reports
2004	Archaeological excavation	Southern city, Quay along the Tigris river, eastern part of the Northern city
	Geophysical Survey	Unexcavated areas in the Southern city and beyond (optional: New Year's festival building area)
	Surface Survey	Outside the city wall (South, West, North)
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts
	Publication	Preliminary reports
2005	Archaeological excavation	Southern city, Quay along the Tigris river, eastern part of the Northern city, Northern city
	Geophysical Survey	Unexcavated areas in the city
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts
	Publication	Preliminary reports
2006	Archaeological excavation	Southern city, eastern part of the Northern city, Northern city
	Geophysical Survey	Unexcavated areas in the city
	Record	Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis
	Restoration and conservation	Selected objects and contexts: transfer of ensembles to museums
	Protection	Coverage of excavated areas
	Publication	Substantial excavation report/s

	Review phase Evaluation of the activities Discussion of further research strategies Systematic observation of the impact of infiltration and flooding on the site Decision making	
2007-2010	Archaeological excavations Geophysical survey Record Publication	Northern city Unexcavated areas Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis Annual preliminary reports
2010	*Review phase* Evaluation of the activities Discussion of further research strategies Decision making	
2010 -	Archaeological exploration according to a specifically designed strategy (to be developed)	Central parts of the Northern city

(2) With retaining wall separated from the site

If a protecting system is constructed entirely separated from the site archaeological exploration of the site and the adjacent areas should concentrate only on those areas accessible which will be affected by the construction of such a system. This will be outside the city walls. In this case, the site of Ashur itself will not have to be object of rescue excavations, and resources should be fully concentrated on the salvage of the other sites in the Makhool reservoir area. Nevertheless, it will be necessary to develop an operational strategy for the future years. Regarding the possible inscription of the site of Ashur and its buffer zone to the World Heritage List of UNESCO the scenario (2) will allow the maximum range of activities and measures to be applied within the process of inscription and future maintenance (cf., e.g., Cleere ed. 1984).

Methods for the study of archaeological data should concentrate on survey, geophysical prospection and archaeological excavation. A surface survey at the southern and northern periphery of the site should be accompanied by geophysical prospection since the question, whether there was any settlement, industrial quarters or a graveyard in the immediate vicinity of the site has never been studied adequately. A geophysical prospection should be abopted in any case in the area of the New Year's festival house which a hundred years ago had been studied by means of excavation at the spot itself (before, investigations into the exact location of this particular building have to be carried out since it cannot be excluded that the modern road covers the ancient remains). Archaeological excavations should be carried out in areas with anomalies or concentration of surface finds. Within the city walls, there

will be no need of enhanced salvage measures as far as archaeological excavation is concerned.

If the here discussed solution is adopted, the efforts should concentrate on the development of conservation measures - independently of the inscription process to the WHL. For restoration activities a similar strategy will have to developed - both in close cooperation with the SBAH.

(3) With retaining wall at the margins of the site

On the occasion of the visit to the site of Ashur and during meetings with H.E. the Minister of Culture, the Chairman of the SBAH and the Director General of Research and Studies and members of the National Commission, the idea of a cost-effective solution for the protection of the site of Ashur was brought up. What was discussed on the basis of information provided by Dr CAVAZZA is a retaining system which makes use of the actual topographical situation of those areas of the site which are bordering the lake. These will be the eastern and northern front of Ashur which have, for the most part, a slopy surface. This specific condition seems to be adequate for the use of so-called “gabions”, i.e. cubi of small quarry stones or pebbles hold together by a wire-network. Accordingly, these gabions will be placed on top of each other in a step-like shape. In order to guarantee the impermeability a water-resistent layer made of various materials will be placed underneath them. Before these gabions are installed, a vertical trench will have to be excavated at the bottom of the retaining system. Being filled with concrete, this installation will prevent the site from a subterranean infiltration. Whereas the northern part of the city could be mostly protected by this gabion-system, in the southern part of the site the present level of the surface may require additional measures. As a working-hypothesis it was discussed to erect upstanding walls, possibly of concrete, with a substantial foundation.

In case a combined retaining system is applied, parts of the site will be destroyed by the preparation of the surface for the impermeable material of the gabion-system and by the erection of supporting measures. Other parts may just be covered by the gabions but remain inaccessible. It is to be expected that a no-excavation zone will have to be defined inside of the gabion-system and the protection walls in order to guarantee the stability of the construction and to avoid any damage. This zone may cover areas which will not be directly affected by the construction itself. If this solution is adopted, it is these comparatively limited parts of the site which will be object of an intensive archaeological rescue operation.

The particular topography of most of the areas requires specific approaches. Certainly, archaeological excavations will be the main method to be applied for the exploration of the affected areas. Geophysical prospections are of equal relevance depending, however, on the feasibility at the actual spot. At selected areas, such as the Mushlalu at the northern front or the river quay area, stereo-photographs should be taken.

As far as can be judged now, there are three emergency areas:

- North: the area ranging from the Tabira gate and *Außenhaken*-area in the west to the Mushlalu gate complex at the central north until the area of the temple of Ashur in the east.
- East: the quay wall area entire zone bordering the river below the temple of Ashur, possibly extending down to the end of the city wall of the New City in the south.
- East: Those archaeological deposits south of the ravine S of the temple of Ashur down to the soutern end of the city which can be reached by open area excavations or step trenches.

It seems that due to the topography of the site, the eastern area will be affected more intensely by a gabion system, since parts of the southern city ly below the reservoir level (c. 156 m above sea level). However, from the archaeologist's point of view it remains difficult to foresee, to which extent archaeological excavations will have impact on the stability of the area which will be used for the gabions and the additional upstanding wall/s.

At the northern front the partly restored Tabira-Gate, the *Außenhaken*-area and the Mushlalu are the known archaeological features which had been recognised by the team of Walter ANDRAE a hundred years ago. Theses structures and the adjacent areas should be re-evaluated and recorded by means of modern equipment. In addition, a careful survey of the remaining northern front should be carried out. This, however, may be hampered by the fact that large quantities of dump from the excavation trenches in the northern city had been thrown just down to the adjacent plain, thus covering parts of the northern front. In the areas of the future no-excavation-zone, a re-examination and additional soundings will have to be carried out, based on the results of the previous excavations in the area, i.e. the zone north of or, partly, between the living quarter, the temple of Anu and Adad, the Old Palace, the Ziqqurrat and the temple of Ashur.

At the lower part of the eastern border of the site the construction of the quay wall is still visible. In this area a thorough re-examination by means of soundings and survey will contribute to obtain a maximum of information. This is also valid for the area south of the excavation house where no quay wall had been recovered so far.

The most difficult and challenging task consists surely in the exploration of those archaeological deposits at the eastern border of the site which so far had been excavated by vertically oriented excavation trenches due to the plateau-like surface of the area. Erosion and clandestine digging as well as the regular excavations by the Iraqi archaeologists illustrate that there is a substantial accumulation of deposits. So far, the overwhelming part of the excavated buildings is of Parthian date, and it can be expected that they just cover Assyrian remains (**Pl. 5.1**).

The substantial erosion ravines in this area revealed a highly interesting topographical situation: the difference between the ancient river level and the level of the immediately adjacent Assyrian occupation made it necessary to bridge considerable differences in height. This apparently led to the erection of substantial retaining walls by means of quarry-stones which can be seen from the surface (the latter is also valid for some grave chambers which were exposed to erosion or clandestine digging earlier the last century). Before any further excavation a systematic study and recording of the area must be carried out in order to decide on the adequate exploration technique. Since it is does not seem possible to excavate the entire eastern flank within the remaining years by keeping a decent scientific standard, step trenches and selected soundings will have to be placed in those areas which are considered important. Whether a total coverage by means of excavations, soundings or other recording techniques can be applied will have to be decided after the evaluation of this specific area of the site.

The following time schedule, therefore, is a preliminary working proposal which will have to be followed up and updated in due course.

Time schedule and working programme for rescue excavations at Ashur (with a retaining system combined of gabions and protective walls)

Year	Measure	Location / task

2003	*Evaluation* Survey and surface observations: Feasibility study Information from the construction company Decision making	 Three emergency zones north and east (N-front, quay wall, deposits near to the river) State of planning and information on geomorphology of the site Archaeological exploration, restoration and conservation measures, impact of the implementation of measures required by the inscription rules WHL
	Cleaning operation and recording Archaeological excavation Geophysical Survey Surface Survey Record Restoration and conservation Publication	Known archaeological structures at the northern and eastern front of the site (Tabira-Gate, Mushlalu, quay wall etc.) Selected operations at the northern front (plateau) and at the eastern side (plateau and step-trench) Measurements in selected areas at the northern and eastern margins Areas north of the site and beyond the southern city wall (including the New Year's festival building site) Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis Selected objects and contexts from excavations Preliminary reports
	Exchange of information with the construction company	
2004	Cleaning operation and recording Archaeological excavation Geophysical Survey Surface Survey Record Restoration and conservation Publication	Known archaeological structures at the northern and eastern front of the site Selected operations at the northern front (plateau) and at the eastern side (plateau and step-trench) Measurements in selected areas at the northern and eastern margins Areas north of the site and beyond the southern city wall Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis Selected objects and contexts from excavations Preliminary reports
	Permanent observation and evaluation of the construction process *Exchange of information with the construction company*	
2005	*Permanent observation and evaluation of the construction process* *Exchange of information with the construction company*	
	Cleaning operation and recording Archaeological excavation Geophysical Survey Surface Survey Record Restoration and conservation Publication	Known archaeological structures at the northern and eastern front of the site Selected operations at the northern front (plateau) and at the eastern side (plateau and step-trench) Measurements in selected areas at the northern and eastern margins Areas north of the site and beyond the southern city wall Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis Selected objects and contexts from excavations Preliminary reports
	Review Obtained results Construction process (scheduled to be finished in early 2006) Buffer zone Exploration strategy and further measures (restoration, conservation, transfer of contexts from the site to museums etc.) Implementation of the WHL requirements	
2006	*Permanent observation and evaluation of the construction process* *Exchange of information with the construction company*	

	Cleaning operation and recording Archaeological excavation Geophysical Survey Surface Survey Record Restoration and conservation Protection Publication	Known archaeological structures at the northern and eastern front of the site Selected operations at the northern front (plateau) and at the eastern side (plateau and step-trench/es) Measurements in selected areas at the northern and eastern margins Areas north of the site and beyond the southern city wall Modern recording techniques parallel to excavations: CAD drawings, kite and aerial photographs; geomorphology; scientific analysis Selected objects and contexts from excavations; transfer to museums if desired Coverage of excavated areas Preliminary reports Preparation of a final report about the results in the explored areas
2007-2010	Regular archaeological exploration according to an archaeological strategy for the site	Unexplored areas in the Northern and Southern city

Concluding remarks

It has to be repeated that it is presently not clear which retaining system will be applied for the protection of the site. This may change when the construction company has finished the study of the soil conditions and the stability of the areas where the retaining system will be constructed.

From the archaeological point of view only such a system should be adopted which leaves the site of Ashur in its entirety unaffected. However, it is clear that the decision on which retaining system will be constructed at Ashur will be made by the Iraqi authorities, not by archaeologists. In this context, the serious interest of the representatives of the Iraqi government and the State Board of Antiquities and Heritage in a protection of the site of Ashur have been recognised and is highly appreciated. Only on this basis it was useful to open a dialogue between all the parties involved. The talks were extremely helpful, and we consider it desireful to continue this exchange.

Much of what is labelled “operational strategy” for the site of Ashur is also connected with the SBAH’s application to put Ashur on the UNESCO World Heritage List. Since this issue lies beyond the goal of the present author it was referred to only in a preliminary way (cf. generally Cleere ed. 1984). However, in case of a positive decision of the responsible body it is considered extremely useful to cooperate on overlapping themes.

As to the implementation of the necessary measures for the site of Ashur and the other sites within the Makhool Dam reservoir area, the foundation of a regional coordination unit should seriously be taken in consideration. Furthermore, the skills and experience of those expeditions already working on the site should be used.

2.4.2 Other sites in the Makhool Dam reservoir area

Whereas for Ashur there exists the possibility of a protection against flooding and infiltration, the other 61 sites will be definitely disappear with the flooding of the Makhool Dam reservoir which is scheduled for the year 2006 (see **Fig. 1**). In discussing salvage measures for the future reservoir area it should be kept in mind that the entire region is part of the archaeological heritage, this is the sites and the surrounding area. This fact has been stated already above (see under 2.2) and should be recognised when dealing with the issue of "other sites" in the Makhool Dam reservoir area. According to the present standard of regional analysis, the chapter should preferably be entitled "other sites *and* the Makhool Dam reservoir area".

Aims

The central aim of the study of the sites and the area of the future Makhool Dam reservoir could be described as the salvage of the maximum archaeological information in the entire area by modern research methods (this includes any scientific study as well as the analysis and translation of cuneiform or other written sources). The following issues are considered of general importance. They can be studied at sites and their immediate surrounding and on a regional level.

Sites and their immediate surroundings

- Topography, layout and size of the settlement
- Social, functional and distributional phenomena
- Economy and subsistence
- Environmental conditions
- Symbolic and religious dimensions
- Material culture
- Chronological indicators
- Irrigation measures
- Site catchment area

Regional analysis

- Topography
- Geomorphology, water courses, soil conditions
- Wild and domesticated forms of plants and animals
- Record of all types of settlements (permanent – temporary, city – hamlet etc.)
- Distribution of settlements
- Study of settlement patterns
- Communication

Methodological approach

An exploration strategy solely based on rescue excavation on sites does not correspond to a modern archaeological methodology. On the other hand, constraints of time, available resources and the shere quantity of sites require effective salvage measures. Nevertheless, the idea of creating a more or less equal methodological standard for all the expeditions working in the area should not be rejected.

Before exploring a site and/or the surrounding (catchment) area the theoretical framework which serves as a starting point for each settlement analysis will have to be discussed. Since regional studies have been carried out in various areas of the Middle East and elsewhere until now, this will not be a time consuming task. On the methodological level it is a point of main interest whether to conceive a site as the sum of visible deposits, i.e. a Tell, or as an entity which consists of the former settlement and its original (hypothetical) catchment area. Compared to a conventional rescue excavation, the study of an archaeological site and its catchment requires a slightly different approach and the participation of additional specialists. The study of a settlement and its former surrounding areas will provide us with a different set of data than just remains of architecture, pottery and a chronological sequence – important enough. It will contribute to a better understanding of land use, cultivation and other natural and human-made phenomena, which pertain in a larger sense to the economic conditions in antiquity. It is the key to the environmental situation which the inhabitants had to face during their life and the impact nature and culture had on each other. Where possible, an approach combining both on-site and off-site research strategies should be applied.

Given the high potential for new results within a limited time it would help if an excavation permit for a site in the Makhool Dam reservoir are includes the possibility to carry out off-site research in the immediate vicinity of a site. The individual circumstances of sites will show whether this can be applied in each case.

In addition to this two-fold research method for single sites or site clusters the idea of an area survey should not be abandoned. There are apparently concrete steps which are undertaken to carry out such a surface reconnaissance on a multi-national level based on the satellite-image acquired by the Italian expedition. One aim of eminent importance is the elaboration of a contour map of the area which presently is not available otherwise.

Since the methodology of the archaeological approach will differ from site to site, it is difficult to elaborate an individual working programme for each site. However, independently from the individual adopted approach, the following steps are considered as essential, even though some of them will be optional:

(1) Mapping
(2) Acquisition of a satellite image of the site (or a "window" from the satellite image which is with the State Board of Antiquities and Heritage and the Iraqi-Italian institute)
(3) Systematic survey on-site and off-site
(4) Geophysical prospection (optional)
(5) Drilling
(6) Excavations in open areas or in test trenches: stratigraphy, chronology of the site (pottery/attested periods)
(7) Scientific analysis of botanic and faunal remains
(8) Radiocarbon dates
(9) Study of textual evidence from the site (optional) and about the site and its area (historical topography)
(10) Restoration of objects (optional)
(11) Record in drawings, photographs, slides etc.
(12) Publication

Discussion of site-related strategies

Based on the priority list of endangered sites and, before, the assessment of the archaeological areas it is only possible to give some general outlines. A combination of surface survey operations, large scale open area excavations or specific soundings will be the adequate tool for obtaining the relevant archaeological information of single sites. A surface survey of the Makhool Dam reservoir area will consist of the

study and analysis of the satellite image and the visit of large parts of the area by car. Since these steps are complementary they should be carried out parallel to each other.

As expected, the extended sites of *Kar-Tukulti-Ninurta*, Khirbet es-Sin and T. Wadi al-Kurdia wa al-Soura require the application of geophysical survey techniques (in addition to the other methods) right from the beginning onwards, since it can be excluded to obtain a coherent picture of the site just by means of excavations. For most of the other accessible sites it seems that the combined approach of survey and excavation as explained in detail above is adequate, and according to previous experience within salvage excavations, the remaining time permits a substantial study of sites – funding and equipment provided.

Whether it is useful to start with the work on sites near to the dam construction area and then moving further north may be discussed in due course since the flooding may proceed surprisingly fast, once the construction of the dam is finished. Although there is presently no detailed information on the regime of the river Tigris it is known as a wild river, especially in springtime when the snow is melting in the mountains. As to the survey it is expected that it will be finished before the actual flooding of the reservoir.

A number of sites is presently covered by modern housing or cemeteries. At other places excavations are impossible since the sites have disappeared (nos. 55, 56 and 57) or are entirely covered by modern buildings (no. 31). According to Mr SHAKIR sites with cemeteries require a special permit of the provincial administration before being excavated (such as Maqbarat Shajara, Maqbarat Shmait [visited by the mission], T. al-Ga'ga'iya, Tulul al-Sidr, Maqbarat al-Atrak, T. Dbes [visited], T. Ghraib 1, T. Maqbarat al-Fayadh, T. al-Kardoushia, Kh. al-Hamidiya, Kh. Haijal al-Kabir and T. Haijal Saghir). If excavations are carried out on such sites, unearthened remains of the deceased will have to be buried elsewhere. It is also to be expected that sites with modern settlements will remain occupied until the flooding starts. In these cases, step trenches in selected areas will serve as the minimum tool in order to obtain an overview on the deposits and their stratigraphy. Presently, parts of sites are covered with modern housing at T. al-Kedish 1, T. al-Ga'ga'iya, T. Dbes [visited], T. Qrei'a, T. Umm al-Arabid, T. Darwish, T. Maqbarat al-Fayadh, Kh. Hayiss, Kh. Dalli, T. Isbeh al-Sufli, T. Saleh al-Dakhil, Kh. al-Hamidiya, Kh. Haijal al-Kabir. At T. Dbes and T. Isbeh al-Sufli the mounds were entirely covered with modern settlements and vegetation. To which extent each the other sites are covered with modern housing could not be established in detail during the stay of the mission.

Whether there are undisturbed remains on the surface will have to be studied on the spot. In any case, a careful cooperation between the inhabitants, the local authorities and the State Board of Antiquities and Heritage is required for sites of this kind.

Concluding remarks

It is to be expected that a concentrated rescue campaign in the Makhool Dam reservoir area will enlarge the knowledge about an important area of Iraq. After more than 30 years of experience with and benefit from regional studies in the Middle East, which started in Southern Mesopotamia, it appears convincing that an archaeological analysis of the Makhool Dam region should be embedded in the framework of this approach. The combination of several exploration techniques and specialists from different fields characterises present-day archaeological work. It is hoped that with the support of the Iraqi government and the great experience of the State Board of Antiquities and Heritage of Iraq an international effort can be made to save the archaeological information of a core area of Assyrian and Mesopotamian civilisation before it is destroyed forever by the water.

3 Recommendations

The following recommendations are based on the results of the visit and the achievments during the stay of the UNESCO mission in Iraq. Additional developments and new information may have an impact on some of them. But it is not expected that the overall direction is affected by that.

As far as Ashur is concerned, the decision of which retaining system will be employed is of greatest importance. As for the success of the salvage campaign for the other sites, the process of inviting the international archaeological expeditions is considered decisive.

It is clear that the Iraqi authorities are seriously concerned of the archaeological heritage in the Makhool Dam reservoir area. The spirit of open discussion and cooperation during the meetings on various levels are a most welcome context for these recommendations.

- (1) In view of the remaining four years for the completion of the rescue operations in the area (2003-2006), we urgently appeal to the State Board of Antiquities and Heritage of Iraq and the Iraqi government to launch an

invitation to archaeological expeditions on an international level for the **salvage of the archaeological sites and landscape of the Makhool Dam reservoir area**. Such an invitation is essential for the fundraising process for archaeological missions.

- (2) **UNESCO** should **fully support** this appeal and the international salvage project.

- (3) In agreement with the Iraqi State Board of Antiquities and Heritage, we recommend the **foundation of a regional coordination centre for the archaeological research** in the area. This centre should be located on the eastern side of the Tigris.

- (4) **UNESCO** should **fully support the foundation of such a regional centre**. If possible, the necessary measures for the centre should be coordinated with the process of the nomination procedure of the site of Ashur for the WHL of UNESCO.

- (5) The archaeological sites of Ashur, the other sites in the future reservoir area and the archaeological landscape are equally important for the research of the cultures and civilisations of this part of Assyria. Therefore, we propose an **integrated approach combining on-site and off-site research in the area**. Methodologically, this approach is based on **archaeological survey strategies, archaeological excavations and scientific methods** of analysis, such as, e.g., palaeoenvironmental studies.

- (6) For current and future archaeological activities in the areas a **detailed topographical map** is required indicating the contour lines, location of all the sites and rivers, communication, natural phenomena etc. The satellite image provided by the Italian expedition to Iraq and the map of the salvage area produced by the State Board of Antiquities and Heritage serve as necessary tools for such a map.

- (7) A **systematic survey of the area** which has been discussed before is considered the adequate method in order to guarantee a full coverage of the topographical and archaeological information within the Makhool Dam reservoir area. This survey has to be carried out with high-state of

the art equipment and technology (GIS, GPS). Accordingly, steps have already been undertaken to initiate such a survey.

- (8) The **archaeological expeditions** working on the sites should receive a **"window" of the satellite image and the topographical map** representing the individual site in order to be enabled to study phenomena linked to the individual site.

- (9) **Archaeological expeditions should work along the minimum requirement guidelines** presented in this report which have been developed based on the discussions during the visit. These guidelines may further developed or adapted according to the actual situation.

- (10) As to the archaeological site of **Ashur**, **information** should be provided **on which retaining system will have to be installed** near or on the site. Only based on this decision it will be possible to refine the archaeological strategy for the site. In this point, overlapping issues with the nomination proposal of the site of Ashur for the UNESCO World Heritage List may exist. A coordination is considered necessary.

- (11) In this context the Iraqi authorities are addressed to **evaluate** thoroughly the possibility of a **lower maximum water level of the reservoir**. At present this is c. 156 m above sea level.

- (12) In case a retaining system will be erected near the site of Ashur or on the site itself a close **cooperation and exchange of useful information between the construction company and archaeologists** involved in the exploration of areas affected by the construction is required.

- (13) An updated **topographical map of the site of Ashur** indicating the **absolute height** above sea level has to be produced in order to make possible a detailed evaluation of the situation of the site.

- (14) The process of archaeological research in the area should be accompanied by **regular meetings of the specialists** involved. In the past meetings of this kind turned out to be extremely fruitful.

- (15) The idea of H.E. the Minister of Culture to hold an **international congress on the research in the Makhool Dam reservoir area** is supported. Similar congresses have been held in Iraq on the occasion of other rescue projects in the 70s and 80s but also on the sites of Ashur and Babylon.

- (16) If within its mandate, **UNESCO** should **support** such an event.
- (17) A **media coverag**e respecting scholarly standards is considered welcome.

- (18) After the end of each season **archaeological expeditions** should be obliged to **deliver a preliminary report** on their work. The **State Board of Antiquities and Heritage** guarantees the **publication of these reports before the next season**.

Discussion

An **immediate implementation** of the recommendations concerns **paragraphs (1)-(4)**, i.e. the international salvage campaign and steps towards the foundation of the regional research centre. After that, the start of the work of additional **archaeological expeditions outside Ashur** will be influenced by recommendations (5), (9) and (17), whereas the outcome of recommendations (6), (7), (8), i.e. the **archaeological survey and mapping procedures**, will affect the expeditions in due course. The implementation of **salvage measures for the site of Ashur** (10) depend mainly on the decision on which retaining system will be erected. Information on the water level (11), the regime of the reservoir and the progress of the evaluation of the feasibility of the construction of a retaining wall have their own impact on this decision. Only based on this, a research strategy for the site covering archaeological exploration, restoration and conservation measures as well as the presentation of the remains can be applied (12). The updated topographical map of the site (13) can be produced immediately. The time schedule of accompanying events, such as **meetings and congresses** (14), (15), (16) cannot be predicted. However, a congress after the first two years of work in the Makhool Dam reservoir area should be taken in consideration. Finally, based on the experience of other salvage projects in the Middle East the issue of a **regular output of publications** (17) is considered of high importance.

Concluding remarks

Taking in account the atmosphere of cooperation between the State Board of Antiquities and Heritage, the Minister of Culture, the Minister of Education and the members of the UNESCO mission, we have a positive view on the results obtained by the mission. Even though some of the important goals of the mission were not reached this time, it is believed that there is a potential for the fulfilment of the remaining objectives in the near future.

We express our hope that after launching an international campaign for an archaeological salvage project the international academic community will peacefully work together in the heartland of Assyria. Because the waters of the future reservoir will forever bury cultural heritage it is the eminent obligation of scientists and specialists to work for the maximum salvation of this heritage. If the international salvage campaign is started, there is a great chance to continue the traditional cooperation between the archaeologists from Iraq and other countries in the world.

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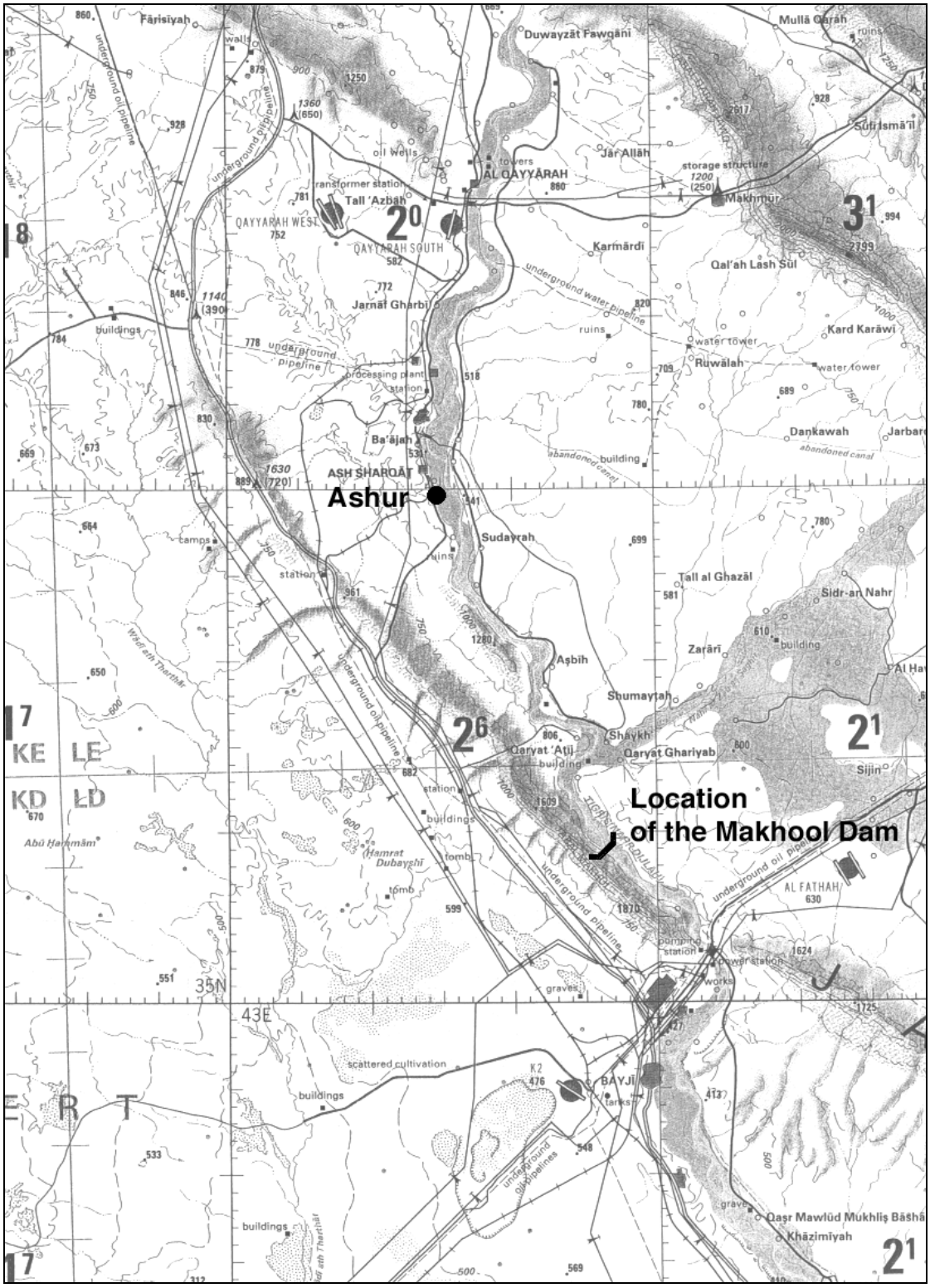
List of Figures and Plates

Plates

Plate 1



Pl. 1.1: Location of the Makhool Dam and the site of Ashur
(Map after Ministry of Defence UK 1991)

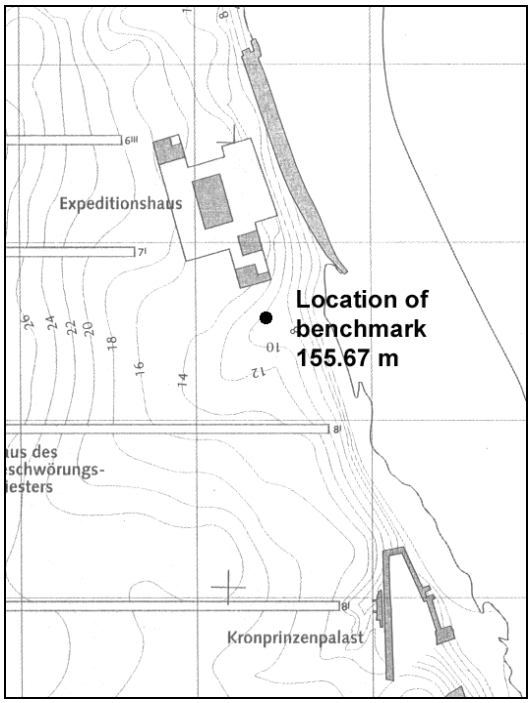
Plate 2

Pl. 2.1: Members of the UNESCO mission to Iraq
(from left to right: Dr Hausleiter, Ms Dauge, Dr George [SBAH], Dr Cavazza)

Pl. 2.2: The site of Ashur towards South
(in front: the former 'cemetery mound' with Iraqi excavation trenches;
in the background to the right: the Jebel Makhool;
to the left: the river Tigris)
(Photograph: A. Hausleiter)

Plate 3

Pl. 3.1: Ashur. Benchmark indicating the maximum flooding level of the Makhool Dam reservoir: 155,67 m above sea level
Location: c. 20 m south of the house of the expedition
(Photograph: A. Hausleiter)



Pl. 3.2: Location of the benchmark
(Map after Finkbeiner and Pongratz-Leisten 1992)

Plate 4

Pl. 4.1: 'Bevelled rim bowls' of the Late Uruk period (end of 4th millennium BC) from Tell al-Nol
(Photograph: A. Hausleiter)

Pl. 4.2: Kar-Tukulti-Ninurta: Palatial building north of the North Palace
(Photograph: A. Hausleiter)

Plate 5

Pl. 5.1: Excavations of the Iraqi expedition at Ashur (New City)
(Photograph: A. Hausleiter)

4.1 Report by the Ministry of Culture (August 2002)

Republic of IRAQ
Ministry of Culture

EXECUTIVE REPORT
ON MAK'HOUL DAM PROJECT &
THE ARCHAEOLOGICAL SITE OF ASSUR

BAGHDAD
August -2002

EXECUTIVE REPORT
ON MAK'HOUL DAM PROJECT &
THE ARCHAEOLOGICAL SITE OF ASSUR

Iraq has embarked on extensive agricultural and economic development plans , which need constant and well-organized river water flow for growing irrigation ,human and other needs .
Iraq has been facing obstacles in this respect mainly from Turkish non-compliance with international norms to achieve mutual agreements with Iraq and Syria on the water share distribution ,thereby ,restraining the flow of the rivers Tigris and Euphrates into Iraqi and Syrian territories .
A number of dams were planned and built on these rivers , of which the Mak'houl Dam is one of these projects.
This dam is situated across the Tigris far to the south of Assur , to reserve three billion cubic meters of water which is the minimum requested level needed for the agricultural and humanitarian use.

Previous dam projects in Iraq, Egypt, Syria, Turkey, and other countries with ancient cultures and various archaeological sites, different in size or in historical importance, have confronted the same situation of being flooded by dam reservoirs.

Since 1977, Iraq started international salvage excavations in flooding areas of its dam projects, when UNESCO invited the state members to participate. More than seventy foreign expeditions representing the most distinguished institutions and museums from all over the world took part together with forty five Iraqi groups in salvage excavations in more than seven hundred sites . Very important collections of antiquities had been rescued out of them, and many historical and cultural new information up dated the common former chronological image of cultures of the ancient Near East.

The Mak'houl dam is not unlike those dams that have been built in Iraq and the precautions are not deferent than the former similar measures that have been taken through the State Board of Antiquities and Heritage with regard to the wide field experience which have been gained by the Board. The number of the sites that

will be included in the salvage campaign will be sixty-one sites together with that of Assur.

It is clear now that the highest level of the flooding will be 156 m. over sea level while the altitude of the city edge looking to the river side is 155.38 above sea level, which is 0.62 m. less than the optimal over flooding line, while the highest point registered in Assur is 179.38m. above sea level, which means 23.38 m. higher than the optimal over flooding line.
Despite of all these relatively easing data, the Iraqi Council of Ministers has taken a decision to invite assistance from UNESCO and other international Organizations to help in planning and the implementation of the best means of the site of ASSUR and the excavations of other smaller sites .
The ministries of culture and Irrigation are foresighting the build up of a surrounding wall around the outskirts of the city facing the water seepage or flow.

The council of ministers has allocated more than ID 2 billion to meet the initial needs of salvage excavation. Excavating teams are working in seven sites in this area . The final flooding will be towards the first quarter of 2006.
The salvage works for the sites and Assur, demands the following:

1. Releasing an international salvage excavation campaign were highly specialized archaeological expeditions can take part.
2. The study of the best engineering means for the erecting of the preventive wall between the site of Assur and the waters of the reservoir.

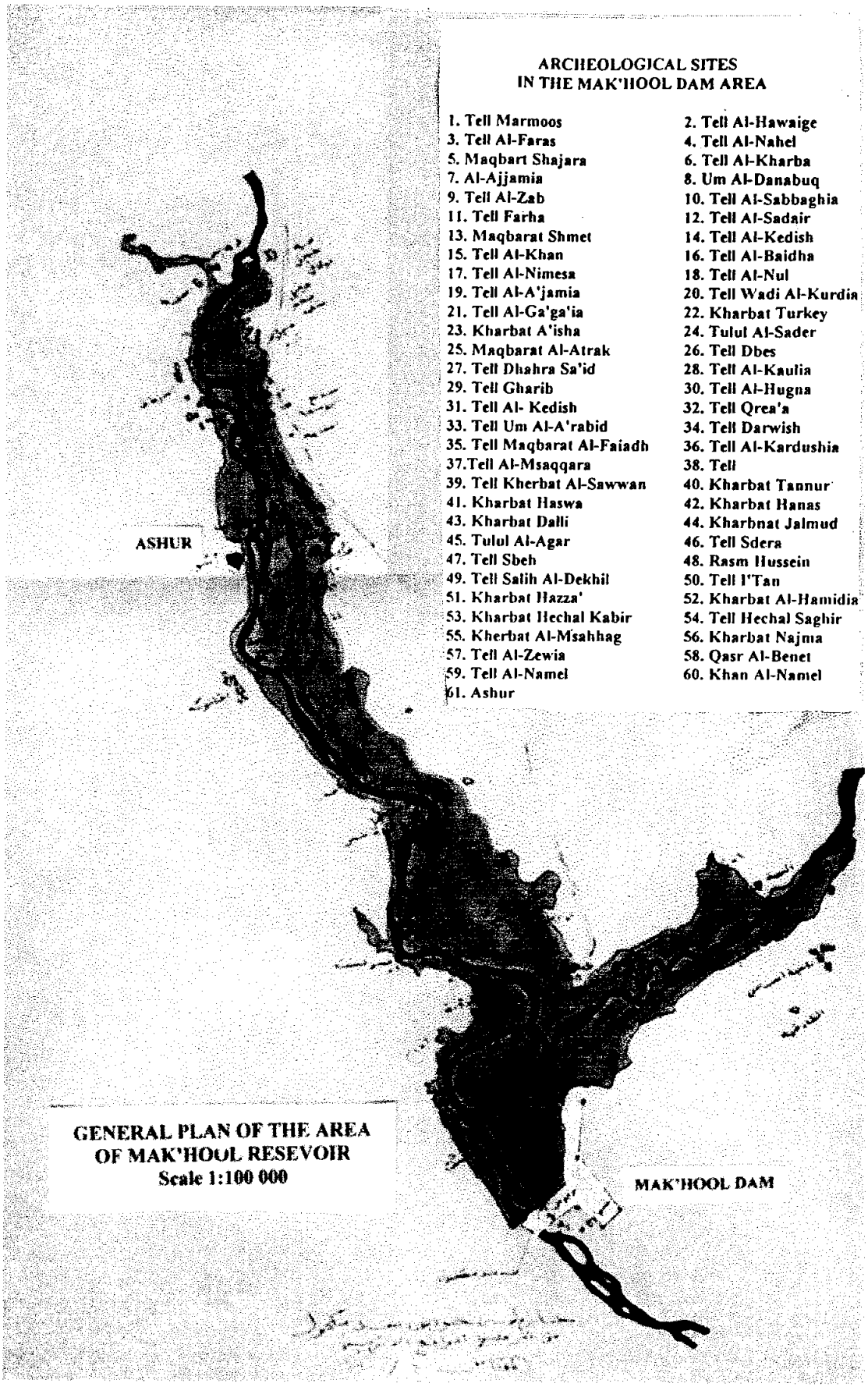
The interests of the Iraqi government in antiquities and its protection s internationally attested. Important archaeological site like Assur, where the archaeological excavations have continued since 1903 and till the recent days, by various German or Iraqi expeditions, and it is worth mentioning that the site is still included in the Iraqi Archaeological Revival Project of Assur since 1980, although the project have been interrupted by the American Imperialist Aggression on Iraq.

TECHNICAL AND SCIENTIFIC NOTES
ON THE CITY OF ASSUR

1. The location of the city of Assur is situated on the western side of river Tigris, and rises 10-16 m. in the northern and eastern edges, and about 30 m. in the middle area (the Ziggurat and Tell Al-Majnna).
2. The site rests on an uneven topographically bedrock beside the river, which is 142.38 m. above sea level, and contains archaeological remains distributed among stratified archaeological levels.
3. There are deferent historical periods represented in the site, starting with the old Sumerian period called Early Dynastic Period (Third Millennium BC.) and even earlier than that, passing through the old Assyrian Period, middle, and the late periods, which end around the middle of the first millennium BC. Then come the Hellenistic and Parthian periods, and the Arab Hatrians dynasty at the late centuries BC.
4. The importance of the city is not only because it was the capital of the Assyrians, and the sacred city that paid no taxes, and the final resting place of some of the great Assyrian kings, but because it had such a deep history and it was an important religious center for the goddess Ishtar starting from the Sumerian first, second, and third early dynastic period (2900-2500 BC.)
5. The city was distinguished for its unique architecture, and it became an example to follow in the coming periods. This architecture was also distinguished, because of its sacredness and for long life as a result of the continuous reconstruction , which were made by kings and rulers until the end of the Assyrian period.
6. It was also distinguished by a special planning system according to the topographical needs of the land, which became later, an Assyrian system for planning their capitals, excluding the geological features of the land.
7. The end of the Assyrian Period did not stop the continuation of life in the city, to have large and important buildings like the Parthian palace, which one of its facades is rebuilt in the museum of the Near East in Berlin.
8. The city is in two parts, the first is called the old city (libbi-ali) (the heart of the city) that is the highest and the biggest part which is surrounded by a double half circle wall. This part contains all the temples of the city, the ziggurats, the palaces of the kings and heires ,and their graves, which are beneath the floors of the old royal palace, and also the general and private houses, and the castles .
9. The modern city (alu-ishshu) (the modern city) that is the lower part of the city (southern) , is surrounded by a part of the city wall, to

become as a narrow tongue alongside the river, this part contained the living houses and some parts of the Parthian palaces.

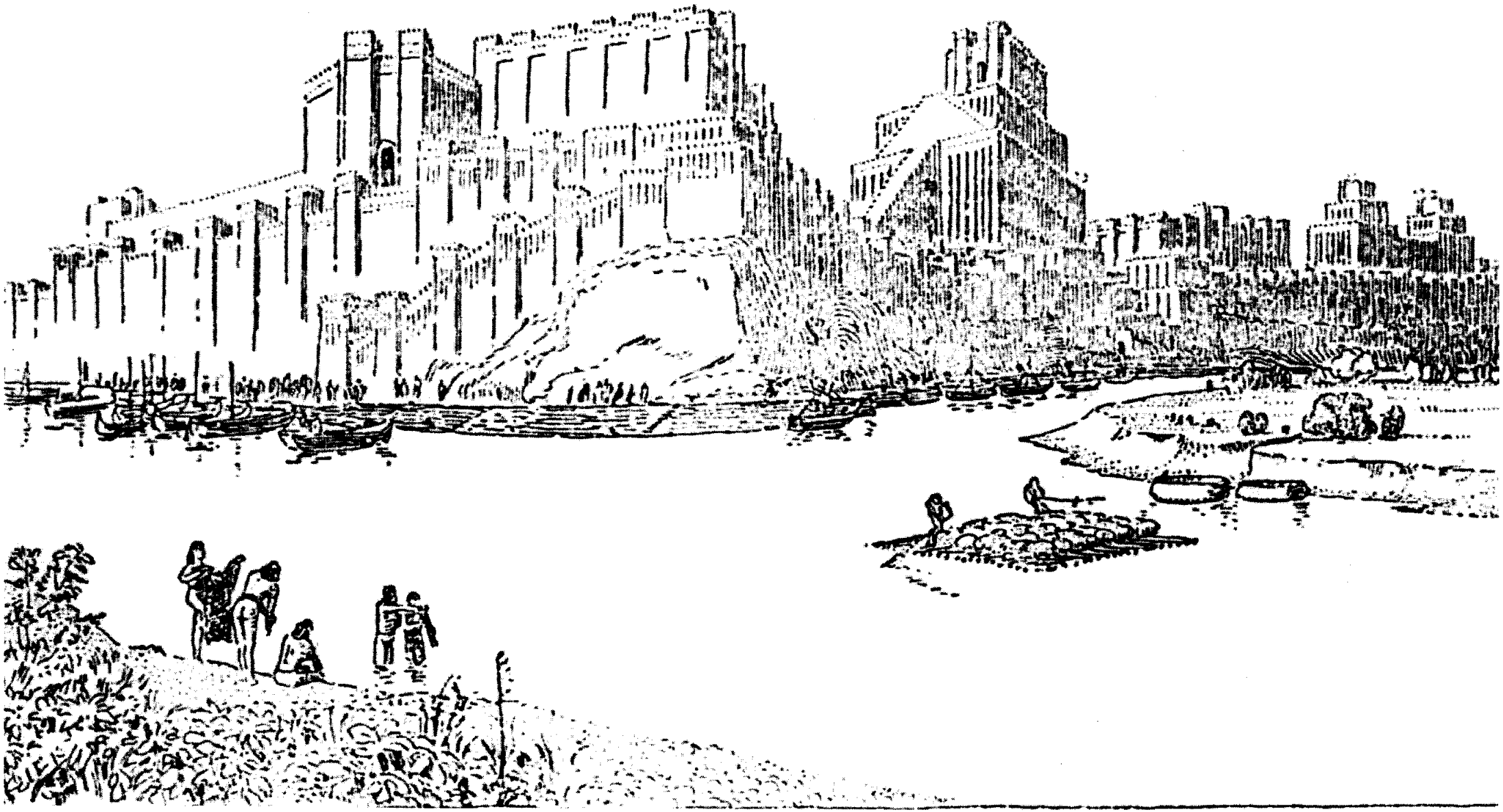
10. The city is surrounded, behind the walls, with a moat, which was left dry until the time of the attacks, and then it was filled with water.
11. The city contains all the temples, except for the (bet-akitu) that was the special temple for the annual festival, and it was built outside of the city walls at the north western corner of the city.
12. The whole city was built with Libin (sun dried bricks) excluding some foundations of palaces that where rocks built.
13. The Germans dug the main ziggurat of the city with a non-scientific system at the beginning of the last century, thinking that it contained a grave like the ones in the pyramids, and not a high temple which was known later by the akkadian name (Ziggurat).
14. The project needed to protect the city, should contain all these architectural facilities inside and outside the city wall, and it should protect the visible antiquities and the ones that are underground now.

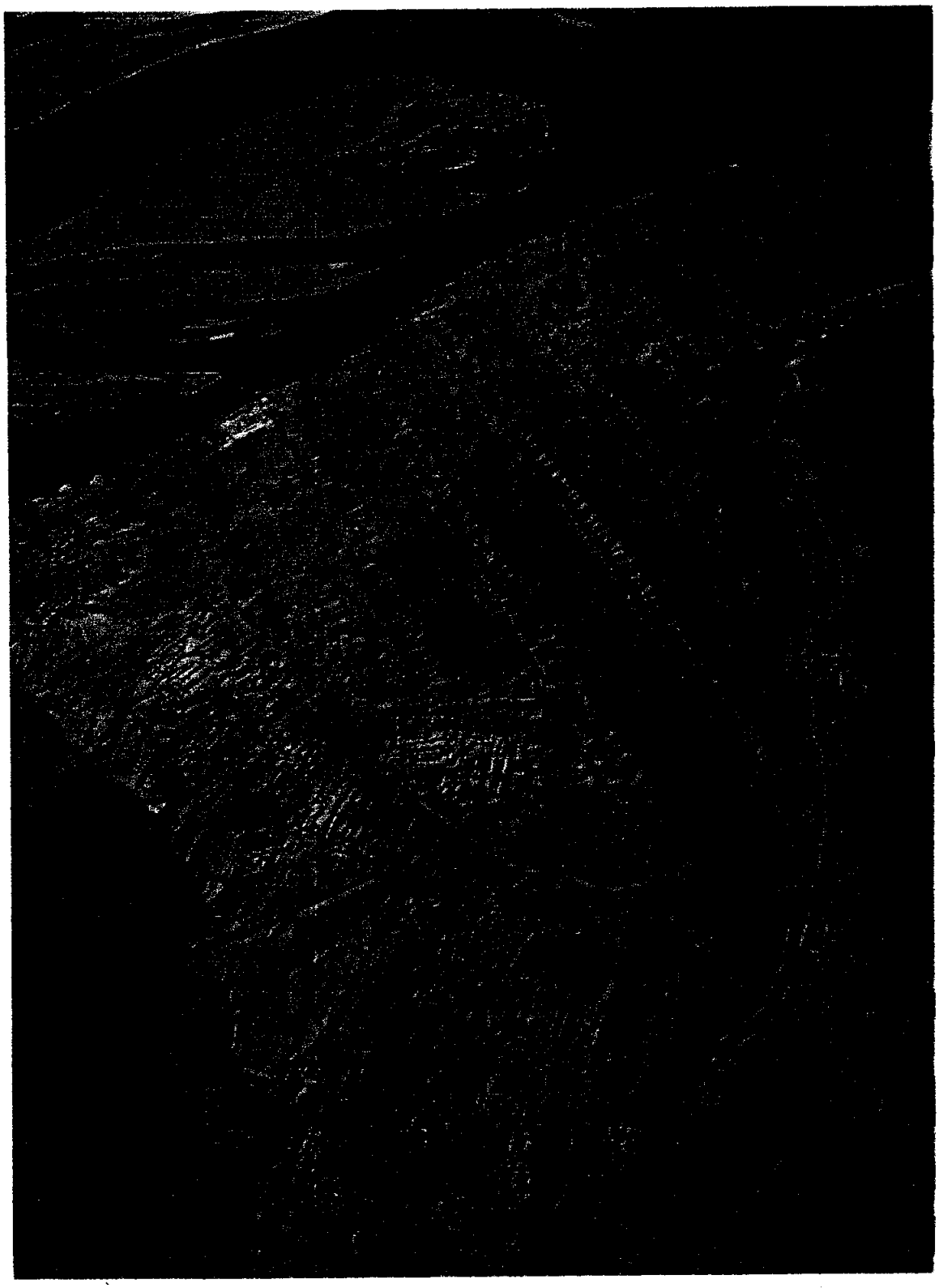


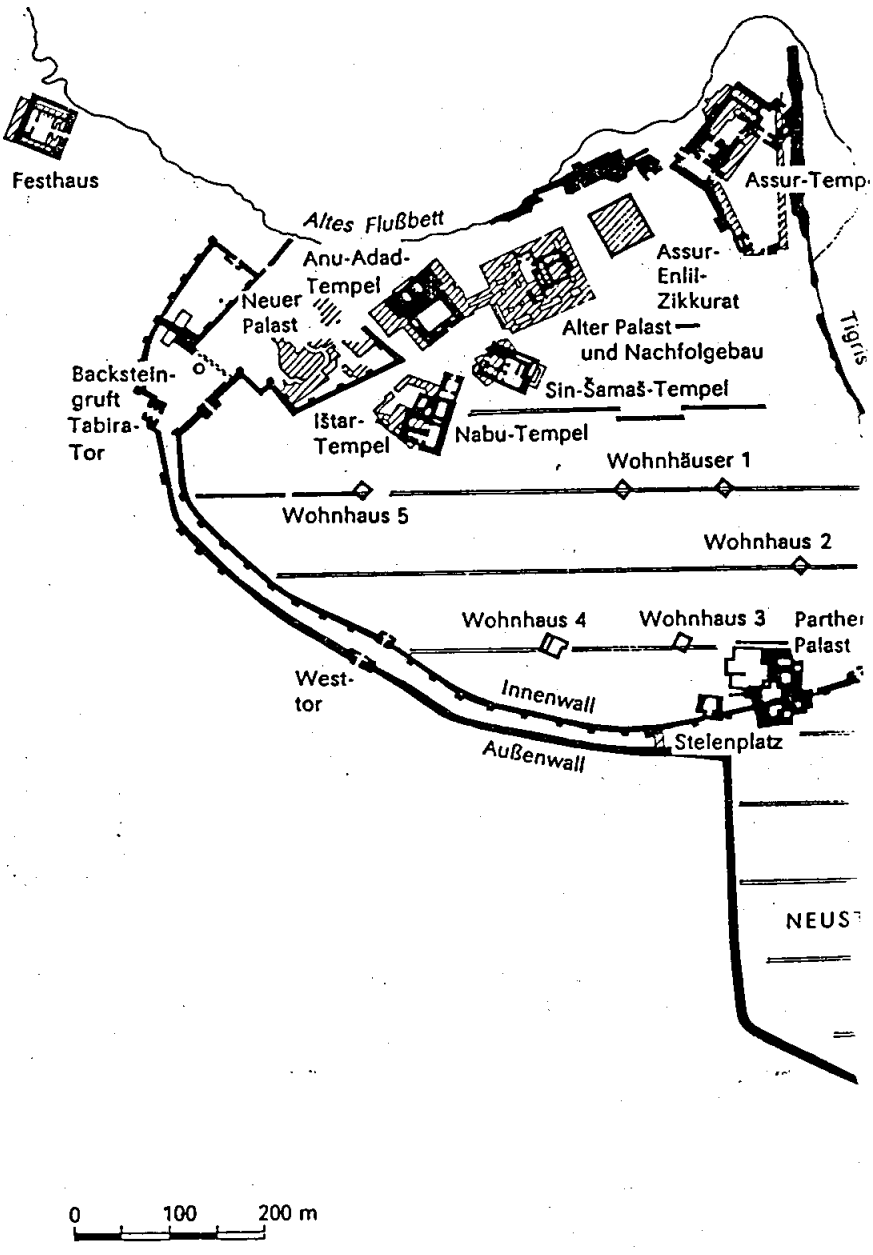
ARCHEOLOGICAL SITES IN THE MAK'HOOL DAM AREA

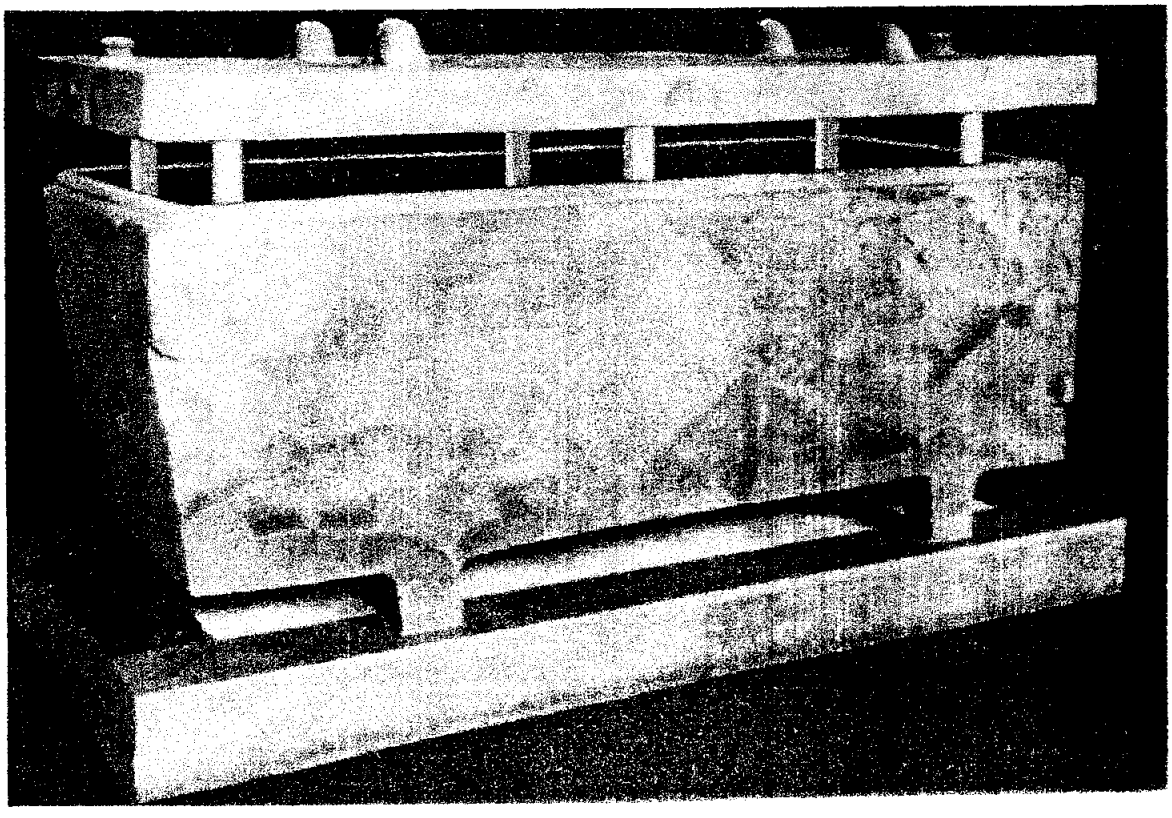
1. Tell Marmoos
2. Tell Al-Hawaige
3. Tell Al-Faras
4. Tell Al-Nahel
5. Maqbart Shajara
6. Tell Al-Kharba
7. Al-Ajjamia
8. Um Al-Danabuq
9. Tell Al-Zab
10. Tell Al-Sabbaghia
11. Tell Farha
12. Tell Al-Sadair
13. Maqbarat Shmet
14. Tell Al-Kedish
15. Tell Al-Khan
16. Tell Al-Baidha
17. Tell Al-Nimesa
18. Tell Al-Nul
19. Tell Al-A'jamia
20. Tell Wadi Al-Kurdia
21. Tell Al-Ga'ga'ia
22. Kharbat Turkey
23. Kharbat A'isha
24. Tulul Al-Sader
25. Maqbarat Al-Atrak
26. Tell Dbes
27. Tell Dhahra Sa'id
28. Tell Al-Kaulia
29. Tell Gharib
30. Tell Al-Hugna
31. Tell Al- Kedish
32. Tell Qrea'a
33. Tell Um Al-A'rabid
34. Tell Darwish
35. Tell Maqbarat Al-Faiadh
36. Tell Al-Kardushia
37. Tell Al-Msaqqara
38. Tell
39. Tell Kherbat Al-Sawwan
40. Kharbat Tannur
41. Kharbat Haswa
42. Kharbat Hanas
43. Kharbat Dalli
44. Kharbnat Jalmud
45. Tulul Al-Agar
46. Tell Sdera
47. Tell Sbeh
48. Rasm Hussein
49. Tell Salih Al-Dekhil
50. Tell I'Tan
51. Kharbat Hazza'
52. Kharbat Al-Hamidia
53. Kharbat Hechal Kabir
54. Tell Hechal Saghir
55. Kherbat Al-Msahhag
56. Kharbat Najma
57. Tell Al-Zewia
58. Qasr Al-Benet
59. Tell Al-Namel
60. Khan Al-Namel
61. Ashur

GENERAL PLAN OF THE AREA OF MAK'HOOL RESEVOIR
Scale 1:100 000






Festhaus
Altes Flußbett
Anu-Adad-Tempel
Neuer Palast
Assur-Enlil-Zikkurat
Alter Palast und Nachfolgebau
Assur-Temp
Tigris
Backstein-gruft Tabira-Tor
Ištar-Tempel
Nabu-Tempel
Sin-Šamaš-Tempel
Wohnhäuser 1
Wohnhaus 5
Wohnhaus 2
Wohnhaus 4
Wohnhaus 3
Parther Palast
West-tor
Innenwall
Außenwall
Stelenplatz
NEUS
0
100
200 m



جمهـــــورية العـــــراق

وزارة الثقـــافـــــة

تقرير مختصر

عن مشروع سد مكحول

وتأثيره على مدينة آشور الأثرية

بغداد ـ آب ٢٠٠٢

تقرير مختصر

عن مشروع سد مكحول وتأثيره على مدينة آشور الأثرية

ضمن مشاريع الخطط التنموية الاستثمارية في العراق ولأغراض توفير مياه الري للحاجات الزراعية والإنسانية والاقتصادية ..خاصة بعدما أدى إنشاء السدود المائية الكثيرة على نهري دجلة والفرات في الجانب التركي من الحدود المشتركة, ومن دون الاتفاق المسبق أو التشاور مع العراق وسوريا الذين يشتركان معه في مياه النهرين, خلافاً لأحكام القانون الدولي بهذا الخصوص مما أدى إلى حبس المياه الجارية في نهري دجلة والفرات عن الأراضي العراقية كما أثر على الحالة الصحية العامة للسكان وعلى البنية الزراعية والبيئية للعراق ..قامت وزارة الري بإنشاء عدد من السدود لتنظيم الإرواء الزراعي ..وكان من بين هذه المشاريع سد مكحول.

وهذا السد يقوم على نهر دجلة على مسافة من مصب نهر الزاب الأسفل, أحد روافد نهر دجلة ..لتجميع ٣ مليارت مكعبة من المياه وهي الحد الأدنى المطلوب لأغراض توفير المياه للاستخدام البشري والزراعي.

وكما هو الحال في مشاريع السدود المنفذة سابقاً في العراق ومصر وسوريا وتركيا أو غيرها من الدول ذات التأريخ الحضاري القديم فإن عدداً من المواقع الأثرية متعددة الحجم والمساحة والأهمية التاريخية و المطلة على وديان الأنهار لا بد وأن تكون معرضة إلى الغرق داخل خزانات السدود المشيدة تحت خطوط مواقعها.

ولقد سبق وأن قام العراق بتنفيذ عدد من هذه السدود في حمرين (على نهر ديالى) وفي أعالي الفرات (داخل الحدود العراقية) وفي أعالي دجلة (داخل الحدود العراقية أيضاً) واستطاع بذلك خزن كميات المياه التي تعبر إليه عبر تركيا وسوريا لتوفيرها لأغراض الحياة اليومية والتحكم في إطلاقها على مدار السنة عبر خطة وطنية شاملة للحصص المائية المحددة حسب الكميات المتوفرة منها سنوياً.

ولقد قام العراق ومنذ عام ١٩٧٧ بإطلاق حملات تنقيب إنقاذية في مناطق الغمر لهذه السدود ساهمت اليونسكو في حينه بدعوة الدول الأعضاء إلى المساهمة فيها .

ولقد شاركت أكثر من ٧٠ بعثة آثارية أجنبية تمثل كبريات المعاهد والمؤسسات والمتاحف من مختلف أرجاء العالم مع ٤٥ بعثة عراقية في التنقيب في أكثر من ٧٠٠ موقع أثري في مواقع

خزانات السدود المشيدة وتم إنقاذ مجاميع مهمة من الآثار من هـــذه المواقـع وتم التوصـل إلى معلومات تأريخية وحضارية جديدة أدت إلى تبديل الصور التاريخية القديمة المعروفة عن التعـاقب الزمني للحضارات وعن بدايات نشؤها في الشرق الأدنى.

إن سد مكحول لا يختلف عن تلك السدود التي سبق وأن نفذت في العـراق , ولـن تختلـف الإجراءات الاحترازية التي تتخذها الحكومة العراقية بشأنها عبر الهيئة العامة للآثار والتراث عـن الإجراءات التي اتخذتها سابقاً ..خاصة وأن هذه الهيئة صارت ذات خبرة ميدانية واسعة في هـذه الأعمال.. وسيكون عدد المواقع الأثرية المشمولة بالحملة الإنقاذية وبضمنها مدينة آشـور ٦١ موقعاً .

ولقد اتضح لنا أن أعلى مستوى للغمر في خزان السد سيكون على مستوى ١٥٦ مـتراً فـوق سطح البحر بينما ارتفاع حافة جرف مدينة آشور هو ١٥٥،٣٨ متراً فوق سطح البحر أي أقـل بـ ٠،٦٢متراً عن مستوى الغمر المثالي والكامل , بينما نرى أن أعلى نقطة في أشور هي بارتفاع ١٧٩،٣٨متراً عن سطح البحر..أي أعلى من مستوى الغمر المثالي بـ(٢٣،٣٨متر) .

وبالرغم من هذه البيانات المطمئنة نسبياً فإن مجلس الوزراء في العراق طالب الجـهات العلميـة والادارية ذات العلاقة بالبحث عن أنجع الوسائل لحماية المدينة بالتعاون مع المؤسسات الدوليـة ذات العلاقة وأولها بالطبع منظمة اليونسكو.

ولقد استقر الرأي في وزارتنا وفي وزارة الري على إقامة سد حاجز للمياه يحيط بالمدينة الأثرية .

إن الأعمال الإنقاذية للمواقع الأثرية وبضمنها مدينة آشور تتطلب ما يلي:

١- القيام بإطلاق حملة دولية للتنقيبات الانقاذية تشارك بها بعثات آثارية مختصة لإنقاذ آثـار المواقع المعرضة للغرق .

٢- دراسة أفضل الوسائل العلمية والهندسية لبناء سد حاجز بين موقع آشور ومياه خـزان السد.

إن اهتمامات الحكومة العراقية بالآثار و حمايتها معروفة عالميا ..وأن أعمال التنقيب في آشور مـا زالت فيه مستمرة منذ عام ١٩٠٣ وحتى اليوم من قبل بعثات ألمانية أو عراقية .

كما أن الموقع كان ولا يزال مشمولا بمشروع إحياء أثري منذ عام ١٩٨٠ إلا أن المشروع قـد توقف بسبب العدوان العسكري الأمريكي الإمبريالي على العراق .

ملاحظات علمية وفنية حول مدينة آشور الأثرية

١- يمتاز موقع مدينة آشور بإشرافه على الجانب الغربي من نهر دجلة وهو يرتفع عن مستوى الماء الجاري للنهر بـ١٠-١٦ متر عند الحافة الشمالية للموقع وكذلك عند الحافة الشرقية كما يرتفع في الوسط بحدود ٣٠متر (الزقورة وتل المجنة)

٢- الموقع يقع فوق أرض صخرية غير منتظمة طبوغرافيا تحاذي الماء الجاري والذي هو على ارتفاع ١٤٢،٣٨متر فوق مستوى سطح البحر ويحتوي على بقايا أثرية موزعة على عدة طبقات أثرية متتالية .

٣- تمثل طبقات الموقع الأثرية عصورا تاريخية عديدة تبدأ بالعصر السومري القديم والمسمى بعصر فجر السلالات (الألف الثالث ق.م.)ولربما أقدم من ذلك بقليل مرورا بالعصور الآشورية القديمة والوسيطة والحديثة والتي تنتهي في منتصف الألف الأول قبل الميلاد وتليها الفترة الهيلينستية إبان الحكم الفرثي وفترة سلالة الحضر العربية في القرون الأخيرة ق.م.

٤- تكمن أهمية المدينة لا في كونها عاصمة للآشوريين ومدينتهم المقدسة المعفاة من الضرائب ومثوى بعض ملوكهم الكبار وإنما لعمق تأريخها الحضاري ولكونها مركزا دينيا مهما لعبادة الآلهة عشتار منذ عصور فجر السلالات الأول والثاني والثالث (٢٩٠٠-٢٥٠٠ ق.م.).

٥- امتازت المدينة بعمارتها المتفردة والتي أصبحت مثالا يحتذى به في العصور اللاحقة ..كما امتازت هذه العمارة بسبب قدسيتها بعمر طويل نتيجة عمليات الصيانة المستمرة التي أجراها الملوك والحكام القدماء عليها وحتى نهاية العصر الآشوري .

٦- كما امتازت بنظام خاص بها في تخطيطها تلبية لطبيعة الأرض الطبوغرافية صار لاحقا مبدأ آشوريا في تخطيط العواصم الآشورية وبغض النظر عن طبيعة الأرض الجيولوجية.

٧- كما أن إنتهاء العصر الآشوري لم يمنع من استمرار المدينة في الحياة ومن ظهور مباني مهمة وكبيرة مثل (القصر الفرثي) والذي نصبت واجهة أحد أواوينه في متحف الشوق الأدنى في برلين كاملة.

٨- المدينة تنقسم إلى قسمين تسمى الأولى بالمدينة القديمة (libbi -ali) أي قلب المدينة وهي القسم الأعلى والأكبر مساحة والمحاط بسور مزدوج نصف دائري . وفيه كل معابد

المدينة وزقوراتها وقصور الملوك وأولياء العهد وقبورهم التي تقع تحت أرضيـــة القصـــر الملكي القديم وكذلك بيوت الخاصة والعامة من الناس والحصون الدفاعية المرتبطة بالسور الخارجي .

٩- المدينة الحديثة(alu -ishshu) أي المدينة الحديثة وهي القسم الأسفل من المدينة ومحاطة بجزء من السور الخارجي لتكون على شكل لسان ضيق يمتد بمحاذاة النهر وفيـــها البيـــوت السكنية وأجزاء من القصور المشيدة في العصر الفرثي (الهيلينستي) .

١٠-يحيط بالمدينة الكاملة من خارج أسوارها خندق دفاعي مائي كان يترك جافا حتى لحظات الحصار فيفتح فيه الماء عندئذ .

١١-تضم المدينة كل المعابد وما عدا بيت آكيتو والذي هو المعبد الخاص باحتفالات راس السنة والذي شيد خارج أسوار المدينة في الزاوية الغربية العليا منها .

١٢-المدينة مشيدة بأكملها باللبن وما عدا بعض الأسس الحجرية للقصور.

١٤-زقورة المدينة الرئيسية تعرضت لحفر غير علمي من قبل البعثة الألمانية في بداية القرن العشرين ظنا منهم أنها تمثل قبرا على شكل الأهرامات وليست معبدا مرتفعا والذي عرف في التنقيبات اللاحقة بالاسم الأكدي (زقورة).

١٥-المشروع المطلوب لحماية المدينة يشمل كل هذه المرافق المعمارية داخل سور المدينة وخارجها كما يجب أن يشمل الآثار الظاهرة وتلك التي لا زالت في أعماق الأرض.

4.2 Report by the State Board of Antiquities (December 2002)

Preliminary Data on the "Makhool Dam"

Background:

Preparations commenced few months ago to build a large dam to intercept the Tigris River, located north of Al-Fat'ha, named Sad Makhool (Makhool Dam). The name is derived from "kohl" (mascara). Also known by this name is the mountain which extends between Fat'ha where the highest peak is, to the vicinity of Assur (Kal'at Sharkat), best known to the inhabitants of the area as al-Khanouka. Within the neighbourhood of this mountain was the city of al-Kuhail, that was referred to in the publications of "al-Buldanyin al-Arab" *(literally translated)*."

The areas to be flooded will extend from the western heights to the eastern hills. In this area there are a large number of villages scattered along both banks of the river in the "Ghurainy" plateau. In this location also there are numerous archaeological sites of different sizes and elevations. The sites on the eastern side of these hills are of higher elevation than the sites on the other side of the river which is due to the proximity of the river flow to the Makhool mountains.

Archaeological and Historical Data:

The archaeological and historical data on this region depend primarily on information acquire from the excavations of the German Mission in Assur (kal'at Sharkat) over eleven years (1903 – 1914). This was complemented by the excavations of the Department of Antiquities a few years ago in "Tel Al-Namil (Tel of the Ants)."

Most of the findings of the Assur excavations were published, including the cuneiform inscriptions, constructional remains and artefacts. Several publications were translated from German into Arabic that represents new and important data covering the Assyrian Nation's history and civilisation in the early ages. These investigations moreover gave a clearer picture of the region's economic, political and demographic status during that period.

The Tel Al-Namil findings, however, remain unpublished but nevertheless important and have revealed a great deal of important data especially in relation to the Sumerian Civilisation during the period of "Fajr al-Sulalat", and in relation to the culture known to specialists as "Naynawa V" (Nineveh V). Although conflicting views existed regarding its origins and the areas to which it spread, the results of the excavations of Tel Al-Namil revealed the co-existence of the two civilisations in the "Makhool" region.

In addition to the information revealed in the excavations of Assur that consisted of archaeological findings and architectural remains, the information shown in the cuneiform inscriptions refers to a number of other cities and geographical positions that had significant activities in the region in particular in maritime (river) transportation.

Also the other information that published in historical annals was complementary to the information in the cuneiform inscriptions and in particular the news of the lost battle led by "Zainaphoun" circa 401 B.C. in Asia Minor. The journey referred to a number of locations and cities along the banks of the river Tigris. Amongst these towns was the city of Kanya which the historians differed as to its location. The name of the Zab river, the system of its crossing was referred to. Other information about the region, t reveals the day-to-day life style and animal and vegetal cover.

During the centuries A.D., the region witnessed changes not least of which was the rivalry between the competing empires, when Trojan's armies crossed the river Tigris at Libbi (meaning the heart or the inner city) in 116 A.D., very likely one of the city of Assur's many appellations in Assyrian. After crossing the river, Trojan followed the riverbank of the river Tigris until he reached the city of Ctesiphon.

During the Arab Islamic era, the Arab Buldanyin offered valuable information on the region, concentrating on the agricultural activities. The information offered by the historian Ibn Jubair; however, when describing the route to Mosul (circa 589 Hijria) is of great value to the researchers of this region in particular.

The descriptive information written by the European historians about the region between the 17th and the beginning of the 20th centuries disclose considerable information on the topographic, demographic and environmental conditions. The more accurate and scientific information, however, came from the German archaeological mission of "Zara & Herzfeld;" they described the archaeological sites located on both banks of the Tigris river. Sites were photographed and drawings of standing archaeological buildings in particular the fortification built on the peaks of the Makhool heights.

<u>We would like to state the following:</u>

1. The dam's storage capacity is approximately three billion cubic metres of water.

2. The filling of the storage area is dependant upon the water flow from the Tigris River and the two "Zab" rivers rather than filling in stages.

3. The archaeological surveys conducted and indicated on maps, refer to 61 sites within the area.

4. As for the archaeological site of Assur, we are in the process of looking into its protection from flooding, by erecting a concrete barrier. A committee from the

Iraqi State Board of Antiquities and Heritage has been formed to study this subject and has submitted its preliminary report.

5. The archaeological sites are distributed along both banks of the river Tigris; however the sites on the western bank are less in number.

6. Works have commenced in three hills (Tels) that are the closest in proximity to the dam barrier. All building materials belonging to the Ministry of Irrigation's construction companies have been placed adjacent to the site.

Archaeological Sites within the area of Makhool Dam

- Table # 1

Site # 1	**TEL MARMOUS**
Village	**MARMOUS**
Nahiya*	**al-ABASSI**
Province	**HAWIJA**
District	**18 al-HAWAIJ**
Surface	**150 x 70 M.**
Site Description	**Oval shaped Tel located at 7 m above the adjoining plain; has a few recent children's graves. Agricultural land has infringed upon the area from the north western side, and the floods of the Tigris have caused erosion.**
Surface Findings	**ASSYRIAN SHARDS**

*** An Arabic name for an administrative sub-division**

- Table # 2

Site # 2	**TEL al-HAWAIJ**
Village	**al-HAWAIJ**
Nahiya*	**al-ABASSI**
Province	**al-HADIJA**
District	**18 al-HAWAIJ**
Surface	**3 dunums only remain from the original site (1 dunum = 2500 sq. m.)**
Site Description	**Located at 6 m. above the adjacent plain, alongside a few inhabited villages. Erosion due to floods is apparent in addition to the removal of earth by the villagers.**
Surface Findings	**ASSYRIAN POTTERY**

- Table # 3

Site # 3	**TEL al-FURS**
Village	**SHAJARA**
Nahiya*	**al-ABASSI**
Province	**al-HAWIJA**
District	**17A SHAJARA**
Surface	**110 m.**
	Circular Tel at 7.5 m. above the adjoining plain, alongside of which

Site Description	**there are farms and children's graves on the surface, and Ottoman war casualties dating to WW1. The Tel has been subjected to infringements by agriculture from three directions, the north, east and the west. Erosion is apparent a result of continuous floods of the Tigris.**
Surface Findings	**ASSYRIAN – SUMERIAN FAJR aL-SULALAT PERIODS**

- Table # 4

Site # 4	**TEL al-NAHIL**
Village	**SHAJARA**
Nahiya*	**Not specified**
Province	**al-SHARKAT**
District	**Not specified**
Surface	**400 x 70 m.**
Site Description	**A settlement located to the left of the Tigris, 6 m above the adjacent plain. Agriculture has infringed upon the site; farmers have dug deep trenches, in addition to levelling its surfaces and edges dividing the site into two, north and south. The site has become a graveyard.**
Surface Findings	**PRE-ISLAMIC AND ISLAMIC POTTERY**

- Table # 5

Site # 5	**SHAJARA CEMETARY**
Village	**SHAJARA**
Nahiya*	**al-ABASSI**
Province	**al-HAWIJA**
District	**17A SHAJARA**
Surface	**15 DUNUMS (1 DUNUM = 2500 SQ. M.)**
Site Description	**Circular settlement, at 4-5 m above the adjoining land and contains hundreds of graves.**
Surface Findings	**ISLAMIC – SASSANIAN PERIODS**

- Table # 6

Site # 6	TEL al-KHIRBA
Village	**SHAJARA**
Nahiya*	**Not specified**
Province	**al-SHARKAT**
District	**Not specified**
Surface	**1KM x 600 m**
Site Description	**It is assumed that this is the location of the city "sin", also known popularly by as (sin barma) often referred to by the Arab Baldanyins and other historians. It is located at 500 m north of Shajara village on the left edge of the Tigris and 5 m above the adjacent land. It is of low elevation for the main part and most probably consists of two levels of habitation (built area). It has 5**

	individual summits that could contain large buildings or more built levels. Farmers from the northern and western boundaries have infringed upon the site from 9 points and that has resulted in exposing the buildings of stone and gypsum or bricks and gypsum There are twin pillars in the northern side of the site.
Surface Findings	**PRE-ISLAMIC AND ISLAMIC PLAIN AND GLAZED POTTERY**

- Table # 7

Site # 7	al-AJAMIYA
Village	**GHARIB al-AJAMIYA**
Nahiya*	**Al-ABASSI**
Province	**al-HAWIJA**
District	**16J GHARIB**
Surface	**70 m. DIAMETER**
Site Description	**A circular Tel some 5 m above the adjacent land, affected by minor land infringements**
Surface Findings	**ASSYSRIAN POTTERY**

- Table # 8

Site # 8	UM al-DANABIG
Village	**Not specified**
Nahiya*	**Al-ABASSI**
Province	**al-HAWIJA**
District	**17A SHAJARA**
Surface	**TWO TELS: THE 1ST 100x50 M., THE 2ND 50 M. IN DIAMETER**
Site Description	**A settlement comprising of two Tels on the left reservoir of the Zab river. The 1st is oval shaped and 7 m high, the 2nd situated to its north, is circular in shape and is 6 m above the adjoining plain and was most probably one of the settlements that got divided by the agricultural land infringements.**
Surface Findings	**PARTHIAN AND ISLAMIC POTTERY**

- Table # 9

Site # 9	TEL al-ZAB
Village	**Not specified**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**62B al-SHIK**
Surface	**100x70 m**
Site Description	**Oval shaped settlement, 12 m above the adjoining land from the northern side, and 20 m. from the southern side. It has houses and a few mud huts.**
Surface Findings	**ASSYSRIAN - SUMERIAN FAJR AL-SULALAT PERIODS**

- Table # 10

Site # 10	al-SABAGHIA TELS
Village	**al-SABAGHIA**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**62B**
Surface	**WESTERN 50x25 M AND EASTERN 100x50m**
Site Description	**Two Tels: The western Tel is located to the west of the village and is considered to have been a large settlement; its eastern part has been totally removed due to transfer of earth. What remains is oval shaped 5m high. The eastern Tel is at some 150 m from the 1st and is located in the eastern side of the village. It too is oval and is 8 m. high and has been affected by agricultural land infringements.**
Surface Findings	**ASSYRIAN POTTERY**

- Table # 11

Site # 11	TEL FARHA
Village	**al-SABAGHIA**
Nahiya*	**Not provided**
Province	**al-HAWIJA**
District	**al-ZAB**
Surface	**180x150 m.**
Site Description	**Located on the north eastern side of the Sabaghiya village and along the reservoir of the Zab river. It is a large settlement and is 15 m. above the level of the water reservoir and 10-12 m. above the village, the eastern side of which was used as a cemetery. It has been affected by agricultural land infringements on its edges causing damage to it in part.**
Surface Findings	**ASSYRIAN POTTERY**

- Table # 12

Site # 12	TEL al-SIDAYER
Village	
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**62B al-SHIK**
Surface	**100x50 m.**
Site Description	**An oval shaped Tel located to the right of the Zab Minor river and is 4 m. above the level of the river. It has been subjected to**

	infringements for agricultural purposes.
Surface Findings	**None**

- Table # 13

Site # 13	SHMAIT CEMETARY
Village	**SHMAIT**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**60J SHMAIT**
Surface	**40 M. AT THE BASE, AND 20 M. AT THE TOP**
Site Description	**The cemetery is located to the south of the village on the main road leading to the Zab river. It is circular in shape, in is elevated at 3.5 m. above the level of the River. It is surrounded by elevations of 1 – 1.5 m. and is used as a cemetery.**
Surface Findings	**None**

- Table # 14

Site # 14	TEL al-KIDEESH
Village	**SHMAIT**
Nahiya*	**Not specified**
Province	**AL-SHARKAT**
District	**Not specified**
Surface	**REMAINING DIAMETER 70 M. ORIGINAL OVER 200X120 M.**
Site Description	**A large settlement that was subject to various infringements resulting in its ruin; its edges were levelled to expand the agricultural areas. Its side elevations rise 3 m. from the extension to the west located under the village houses and what remains of graves. That which remains of it is circular in shape at an average height of 6-7 m.**
Surface Findings	**ASSYRIAN POTTERY**

- Table # 15

Site # 15	TEL AL-KHAN
Village	**SHMAIT**
Nahiya*	**Not specified**
Province	**AL-SHARKAT**
District	**Not specified**
Surface	**WESTERN 1 DOUNUME. EASTERN 100x70 M.**
Site Description	**Located at 100 m. north of Tel al-Kideesh and was probably a large settlement originally. It was split as a result of the levelling of the area and other infringements. The Khan was divided randomly into**

	two parts. Its extension was eliminated. What remains are two separate peaks. The western peak is irregular in shape. They are 6.5 – 7 m. high. Recent infringements are noted.
Surface Findings	**ASSYSRIAN POTTERY**

- Table # 16

Site # 16	TEL al-BAIDHA
Village	**al-O'YOUN**
Nahiya*	**al-ABASSI**
Province	**al-HAWIJA**
District	**15B JARSHALOO**
Surface	**2 DONUMS (1 DOUNUME = 2500 SQ. M.)**
Site Description	**Located on the left side of the Zab river on the eastern side of the reservoir. It is irregular in shape due to erosion and its subjection to continued floods. It is 5 m. high**
Surface Findings	***None***

- Table # 17

Site # 17	TEL al-NUMAISA
Village	**al-NUMAISA**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**59 al-NUMAISA**
Surface	**100x50 m.**
Site Description	**It is an oval shaped Tel 4 m. high and is affected by agricultural infringements that have resulted in the levelling of its sides.**
Surface Findings	**ASSYRIAN MIDDLE POTTERY**

- Table # 18

Site # 18	TEL al-NOOL
Village	**Not specified.**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**62A al-SHIK**
Surface	**70x30 m.**
Site Description	**There are remains of an oblong shaped Tel. It is 3 m. high. A large part of this was levelled for agricultural purposes. A water pump has been installed in the remaining part.**
Surface Findings	**ASSYRIAN MIDDLE POTTERY**

- Table # 19

Site # 19	TEL al-AJAMIYA
Village	**SABIH al-SUFLI (LOWER SABIH)**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**Not specified**
Surface	**50x50 m.**
Site Description	**An almost square shaped settlement. It was excavated by the Tel al-Namil mission in 1999. Islamic period buildings were found.**
Surface Findings	**None**

- Table # 20

Site # 20	TEL WADI al-KURDIA AND al-SOURA
Village	**SABIH AL-SUFLI (LOWER SABIH)**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**63 SABIH VILLAGE**
Surface	**400-450x1 km**
Site Description	**It is located on the eastern bank of the Tigris. With the exception of some parts that do not exceed 4 m. in height from the surface of the parallel settlement, the remaining parts are low. Irrigation ditches have been burrowed and tracks have been cut to allow circulation of agricultural machinery.**
Surface Findings	**ISLAMIC AND PRE-ISLAMIC PERIODS**

- Table # 21

Site # 21	TEL al-KAKAIYA
Village	**SABIH al-SUFLI (LOWER SABIH)**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**Not specified**
Surface	**10 DUNUMS (1 DUNUM = 25OO SQ. M.)**
Site Description	**A large settlement, eroded on the side bordering on the river. It is elevated approx. 20 m above the river and is situated on a rocky bank of the river. Its eastern side is 10-12 m above the surrounding land. It has been used recently as a cemetery and for housing which has caused damaged to its surface. It is classified as one of the important sites in the basin.**
Surface Findings	**ASSYRIAN POTTERY AND SUMERIAN FAJR AL-SULALAT PERIODS**

- Table # 22

Site # 22	KIRBAT TURKI
Village	**al-HAKNA**
Nahiya*	**Not specified**
Province	**al-SHARKAT**
District	**68 AL-HAKNA**
Surface	**100 m IN DIAMETER**
Site Description	**A small Tel 3-3.5 m higher than the adjoining plain. It is affected by various infringements. Large quantities of earth were transferred to elevate the level of the adjoining road. Its borders have been used for agricultural purposes.**
Surface Findings	**ASSYRIAN PERIOD**

- Table # 23

Site # 23	KHIRBAT ESHA
Village	**al-HAKNA**
Nahiya*	**Not specified**
Province	**al-SHARKAT**
District	**68 al-HAKNA**
Surface	**60 m IN DIAMETER**
Site Description	**A small Tel 2.5 – 3 m above the adjoining plain. It has been infringed upon agriculture.**
Surface Findings	**ASSYRIAN AND ISLAMIC SHARDS**

- Table # 24

Site # 24	TLOUL AL-SIDIR **(TLOUL IS PLURAL FOR TEL)**
Village	**al-SIDIR**
Nahiya*	**al-ZAB**
Province	**aL-HAWIJA**
District	**Not specified**
Surface	**THE 3RD TEL IS 40 M AND THE 4TH 45 M IN DIAMETER**
Site Description	**It is located 12 kms to the north west of the Zab river. 4 Tels, two of which to the right of the road were excavated in 1999. There are two small settlements from the middle Assyrian period. The 3rd is to the left of the road at approx. 200 m and is located on the eastern bank of the Tigris. It is a small Tel located opposite the two Tels excavated Tels. It is used as a cemetery and is elevated to 5 m above the riverbank. The 4th Tel is located to the north western side of al-sidir village, located on the left of the main road. I is circular shaped and is 4 m higher than the surrounding plain. its buildings are of brick, stone and gypsum.**
Surface Findings	**FEW ISLAMIC SHARDS**

- Table # 25

Site # 25	MAKBARAT AL-ATRAK
Village	**al-RAWAYIN**
Nahiya*	**al-ZAB**
Province	**al-HAWIJA**
District	**62 al-SHIK**
Surface	**100x50 m**
Site Description	**It is oval in shape, and is 4 m in height, and stretches to the southern and south eastern side for almost 100 m from the eastern bank of the Tigris. Its extension is around 70 m in width and is elevated above the riverbank by 15-17 m and houses recent graves. The soil has been ploughed for agricultural purposes and for the extension of water pipes to the farms.**
Surface Findings	**ASSYRIAN AND ISLAMIC POTTERY**

- Table # 26

Site # 26	TEL DBÈS
Village	**N.A.**
Nahiya*	**al-ZAB**
Province	**al-SHARKAT**
District	**Not specified**
Surface	**Note specified**
Site Description	**A small Tel located to the west of the centre of the Nahiya of al-Zab at 40 kms. over which a new village was recently constructed and given the same name. The presence of this village has caused damage and has distorted the Tel's characteristics rendering it impossible to obtain any indications regarding its origin.**
Surface Findings	**None**

- Table # 27

Site # 27	TEL DHAHRAT SAÏD
Village	**SHAJARA**
Nahiya*	**al-ABASSI**
Province	**al-HAIJA**
District	**17A SHAJARA**
Surface	**1ST TEL 70x40 m, 2ND TEL 65x50 m**
Site Description	**There are two Tels; the 1st is small and is located to the south of al-Sin city and is 5 m high. The 2nd is located to the south west of the al-Sin city at some 300 m and is 5 m high. It is probably part of al-Sin city.**
Surface Findings	**PRE-ISLAMIC AND ISLAMIC PERIODS**

- Table # 28

Site # 28	TEL AL-KAWLIYA
Village	**N.A.**
Nahiya*	**al-ABASSI**
Province	**al-HAWIJA**
District	**17A SHAJARA**
Surface	**TWO TELS. 1ST 50 m IN DIAMETER AND THE 2ND SMALLER**
Site Description	**A settlement consisting of 2 Tels. The 1st Tel is 4 m high and the 2nd is 2.5 m high. It is most likely that originally there was one Tel which could have been separated by the agricultural infringements.**
Surface Findings	**PRE-ISLAMIC AND ESLAMIC PERIODS**

- Table # 29

Site # 29	TEL GHRAIB
Village	**GHRAIB**
Nahiya*	**Al-ABASSI**
Province	**Al-HAWIJA**
District	**16J GHRAIB**
Surface	**Not specified**
Site Description	**There are two Tels; the 1st is located on the Zab river reservoir directly. Its area is 2 dunums and has been used as a cemetery by the villagers. The 2nd is located at 100 m to the east of the 1st and is circular in shape and is 4 m higher than the adjoining land and 10-12 m. from the reservoir. It has been subjected to damage and only 40 m remain of its diameter.**
Surface Findings	**None**

- Table # 30

Site # 30	TEL aL-HIKNA
Village	**Al-HIKNA**
Nahiya*	**Not specified.**
Province	**Al-SHARKAT**
District	**68 HIKNA**
Surface	**Not specified**
Site Description	**There are two Tels. Both located on the eastern bank of the Tigris. The western one has been excavated. The eastern one, adjacent to the 1st, has been partly excavated and is used as a cemetery by the villagers. the 1st is affected by agricultural infringements.**
Surface Findings	**(WESTERN) MIDDLE ASSYRIAN – (EASTERN) ISLAMIC PERIOD**

- Table # 31

Site # 31	TEL al-KIDEESH
Village	**SDERA al-SUFLA (LOWER SDERA)**
Nahiya*	**Not provided**
Province	**AL-SHARKAT**
District	**64**
Surface	**20 M IN DIAMETER**
Site Description	**Small Tel; 1.5 m high. New houses have been built over it.**
Surface Findings	**FEW ASSYRIAN SHARDS**

- Table # 32

Site # 32	TEL KREIA (GREIA)
Village	**SDERA al-SUFLA (LOWER SDERA)**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**64 SDERA AL-SUFLA**
Surface	**50x80 m.**
Site Description	**It is located on the edge of the reservoir in the southern part of the Sdera al-Sufla village; it is at 8 m from the reservoir and 3.5 m from the adjoining land.**
Surface Findings	**ASSYRIAN POTTERY**

- Table # 33

Site # 33	TEL UM al-ARABEED
Village	**SDERA al-SUFLA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**100x70 m.**
Site Description	**A settlement located to the north west of Tel Qreia (greia) at a distance of 700 m from on the reservoir's edge south of Sdera al-Sufla village. It is 5 m high. Large quantities of earth have been removed from the reservoir's side and several houses have been built over it.**
Surface Findings	**ASSYRIAN POTTERY**

- Table # 34

Site # 34	TEL DAEWISH
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**AL-SHARKAT**
District	**71 SDERA AL-WOUSTA**
Surface	**100x75 m.**
Site Description	**It is oval in shape and is 3.5 m. higher than the adjoining land. A large number of houses have been built over it and a great part of its edges have been cut-off.**
Surface Findings	**ASSYRIAN AND PARTHIAN POTTERY**

- Table # 35

Site # 35	TEL MAKBARAT al-FAYADH
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**71 SDERA AL-WOUSTA**
Surface	**5 DUNUMS (1 DUNUM = 2500 SQ. m.)**
Site Description	**It is irregular in shape. A large amount of earth has been removed. It contains houses and graves currently used. To its west is another Tel that is damaged called Khirbat Azawi on the northern and western edges of which are residential houses.**
Surface Findings	**ASSYRIAN POTTERY SHARDS**

- Table # 36

Site # 36	TEL al-KARDOUSHIA
Village	**SDERA AL-WOUSTA**
Nahiya*	**Not provided**
Province	**AL-SHARKAT**
District	**71 SDERA AL-WOUSTA**
Surface	**200x150 m.**
Site Description	**An almost oval shaped settlement. 4 m high and contains children's graves. Different infringements have led to the disappearance of finds and the removal of earth.**
Surface Findings	**ASSYRIAN, PARTHIAN AND SASSANI PERIODS**

- Table # 37

Site # 37	TEL al-MSAKRA (AL-MSAGRA)
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**AL-SHARKAT**
District	**Not provided**
Surface	**70 m IN DIAMETER**
Site Description	**It is located at 500m. to the right side of the road leading to Gayyara, north east Sdera al-Wousta. It is circular in shape and is 4 m higher than the adjoining land. Adjacent to it is a modern house and a well. There are minor infringements.**
Surface Findings	**ASSYRIAN AND ISLAMIC POTTERY**

- Table # 38

Site # 38	TEL without name
Village	**SHAJARA**
Nahiya*	**al-ABASSI**
Province	**al-HAWIJA**
District	**17A SHAJARA**
Surface	**LESS THAN 1 DOUNUM**
Site Description	**It is irregular in shape and is 3.5 m higher than the adjoining land. no infringements exist.**
Surface Findings	**ISLAMIC POTTERY SHARDS**

- Table # 39

Site # 39	TEL KHIRBAT al-SAWAN
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**72B SDERA al-OULIA (UPPER SDERA)**
Surface	**APPROX. 3 DONUMS (1 DOUNUM = 2500 SQ. M.)**
Site Description	**irregular in shape settlement, its height does not exceed 75-100 cm and is a cultivated land. affected by agricultural infringements causing damage of the upper inhabited surfaces.**
Surface Findings	**COLOURED AND PLAIN POTTERY SHARDS FROM THE SAMARA AND HILF PERIODS**

- Table # 40

Site # 40	KHIRBAT TANOUR

Village	**SDERA al-OULYA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**Not provided**
Site Description	**It is located at approx. 1 km north Sdera al-oulya village, opposite Assur's ziggurat. It consists of four small Tels adjacent to each other Tels. There are agricultural infringements.**
Surface Findings	**ASSYRIAN, PARTHIAN AND ISLAMIC POTTERY SHARDS**

- Table # 41

Site # 41	KHIRBAT HASWA
Village	**SDERA AL-OULYA**
Nahiya*	**Not provided**
Province	**Al-SHARKAT**
District	**Not provided**
Surface	**100 m IN DIAMETER**
Site Description	**It is located on the right side of the road leading to villages of Sderat and Gayyara at 1 km north of Sdera al-Oulya village, opposite Assur's ziggurat. It is Circular in shape; 5 m high, and to its west is another small Tel at 400 m. There is irregular excavation; the land has been ploughed and caused damage to its contents.**
Surface Findings	**ASSYRIAN AND PARTHIAN POTTERY**

- Table # 42

Site # 42	KHIRBAT HANS WA HAYESS
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**71 SDERA al-WOUSTA**
Surface	**100x70 m.**
Site Description	**Hans Tel is rectangular and 4 m high. a water well has been dug as well as ditches; it is affected by agricultural infringements.** **Hayess Tel is south of Hans Tel at 500 m and has been damaged due to the recent construction of houses** **.**
Surface Findings	**HANS TEL: MIDDLE ASSYRIAN AND PARTHIAN PERIODS**

- Table # 43

Site # 43	KHIRBAT DALLI
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**AL-SHARKAT**
District	**71 SDERA al-WOUSTA**
Surface	**100 m. IN DIAMETER**
Site Description	**It is circular in shape and is located within the village houses and there are houses on the site; it is 4.5 m high. large quantities of its earth and construction blocks have been removed for construction purposes.**
Surface Findings	**ASSYRIAN PERIOD**

- Table # 44

Site # 44	KHIRBAT JALMOUD
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**71 SDERA al-WOUSTA**
Surface	**50x200 m.**
Site Description	**A large settlement, approx. 6-7 m. higher above the adjoining plot. On one of its edges is a well. The area has been affected by agricultural infringements.**
Surface Findings	**ASSYSRIAN, PARTHIAN AND ISLAMIC PERIODS**

- Table # 45

Site # 45	TLOUL al-AKR (KARTAKOLTI NINORTA)
Village	**Not provided**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**Not provided**
Site Description	**It is located at approx. 3-4 kms to the north of the city of Assur. The site extends to the main road on the side of the Tigris river on its eastern edge at an approximate distance of 1km. It is amongst the walled Assyrian cities dated to the Middle Assyrian period. Outside the walls to the north and the west are some small Tels that could be the villages that normally surround main cities. There are agricultural infringements.**
Surface Findings	**There are no surface findings.**

- Table # 46

Site # 46	TEL SDERA
Village	**Not provided**
Nahiya*	**Not provided**
Province	**Not provided**
District	**Not provided**
Surface	**Not specified**
Site Description	**A small settlement on the right side of the road leading to Nahiyat al gayyara. It was excavated in the year 2000 and it dates back to the Samarra and Hilf periods.**
Surface Findings	**No surface findings**

- Table # 47

Site # 47	TEL ISBEH
Village	**ISBEH al-SUFLI**
Nahiya*	**Not provided**
Province	**al-HAWIJA**
District	**63 KARIAT ISBEH**
Surface	**4 DUNUMS (1 DUNUM = 2500 SQ. m.)**
Site Description	**A large settlement, 3-4 m above the adjacent land; irregular in shape due to land infringements, construction of houses and removal of earth.**
Surface Findings	**No surface findings**

- Table # 48

Site # 48	RASSM HUSSEIN AL-ABBAS
Village	**ISBEH al-SUFLI**
Nahiya*	**AL-ZAB**
Province	**al-HAWIJA**
District	**Not provided**
Surface	**160x140 m.**
Site Description	**Large oval shaped Tel; 5 m high. Some of its contents on the edges disappeared with agricultural infringements. There are also graves on the eastern side.**
Surface Findings	**ASSYRIAN POTTERY SHARDS**

- Table # 49

Site # 49	TEL SALEH al-DAKHEEL
Village	**SDERA al-OULYA**
Nahiya*	**Not provided**
Province	**Al-SHARKAT**

District	**Not provided**
Surface	**100x60 m.**
Site Description	**It is located on the western side of Sdera al-Oulya village and is 3 m. high. A large amount of earth has been removed due to the concentrated construction activity dwellings**
Surface Findings	**ASSYRIAN POTTERY**

- Table # 50

Site # 50	TEL I'ITTAN
Village	**al-SAFINA (CLOSE BY AL-JAFAIFA VILLAGE)**
Nahiya*	Not provided
Province	**Not provided**
District	**Not provided**
Surface	**50 m. IN DIAMETER**
Site Description	**A group of four Tels, one of which is small and is 3.5 m. higher than the adjoining land. the other three Tels are smaller. All the land is cultivated**
Surface Findings	**No surface findings**

- Table # 51

Site # 51	KHIRBAT HAZZA
Village	**al-TALAA**
Nahiya*	**Nprovided**
Province	**al-SHARKAT**
District	**73 al-TALAA**
Surface	**30 m**
Site Description	**A small settlement, located at the southern end of a Tel of gravel, 2.5 m. higher than the adjoining land.**
Surface Findings	**No surface findings**

- Table # 52

Site # 52	KHIRBAT al-HAMIDIYA
Village	**HAIJAL al-KABEER**
Nahiya*	**Nprovided**
Province	**Al-SHARKAT**
District	**83 HAIJAL al-KABEER**
Surface	**Not provided**

Site Description	**The Tel's sides are totally damaged. 4 m. above the adjacent land. Residential houses have been constructed on top of the Tel and large quantities of earth were removed.**
Surface Findings	**ASSYRIAN PERIOD**

- Table # 53

Site # 53	KHIRBAT HAIJAL al-KABEER
Village	**HAIJAL al-KABEER**
Nahiya*	**Not provided**
Province	**Al-SHARKAT**
District	**83 HAIJAL al-KABEER**
Surface	**100x65 m.**
Site Description	**A large settlement, higher than the reservoir by 4-5 m. affected by a large number of recently constructed residential houses and mud huts. Large quantities of earth were removed.**
Surface Findings	**ASSYRIAN PERIOD**

- Table # 54

Site # 54	TEL HAIJAL SAGHEER "SHAHAD"
Village	**HAIJAL SAGHEER**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**76 HAIJAL SAGHEER**
Surface	**40 DONUMS (1 DOUNUM = 2500 SQ. M.)**
Site Description	**A very large settlement. 8-10 m. high. It contains a large concentration of graves.**
Surface Findings	**ASSYRIAN PERIOD**

- Table # 55

Site # 55	KHIRBAT al-MASHAK
Village	**AL-MASHAK**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**Not provided**
Site Description	**The Tel is located opposite Tel al-furs. Some sources claim that the**

	khirba disappeared with the floods, most likely; however, the inhabitants of the village eradicated it to exploit for construction and agriculture.
Surface Findings	**ASSYRIAN PERIOD**

- Table # 56

Site # 56	KHIRBAT NIJMA
Village	**al-ZAOUIYA**
Nahiya*	**Not provided.**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**50x50X04 M.**
Site Description	**The settlement is almost square in shape and is 4 m. high. It is totally damaged and has been used as a quarry for gravel.**
Surface Findings	**Not provided**

- Table # 57

Site # 57	TEL al-ZAWIYA
Village	**al-ZAWIYA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**200x120 m**
Site Description	**It is known to the inhabitants of the area "alwat hamad" and is some 4 m. above the adjoining plain. The settlement was originally built on a rocky and gravel edge of the site. The site is totally damaged and has been levelled for use as agricultural land.**
Surface Findings	**ASSYRIAN AND SUMERIAN FAJR AL-SULALAT PERIODS**

- Table # 58

Site # 58	QASR al-BINT
Village	Not provided
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**Not provided**
Site Description	**The fort (tower) is located directly on the river bank, oppositeWadi al-Karawiya , over a 50 m high mount. It appears to be an**

	observation tower because of its height and position. It dates back to the pre-Islamic period, i.e. Parthian and Sassanian; although no pottery shards were found on site. It was dated erroneously in the historical directories as being Sumerian, Akadian and Babylonian.
Surface Findings	ASSYRIAN PERIOD

- Table # 59

Site # 59	TEL al-NAMIL
Village	**SDERA al-WOUSTA**
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**125x75x6 m**
Site Description	**Also known as "tolayl" a diminutive of Tel. It was excavated by an Iraqi expedition. It includes a circular building in addition to other units. It dates to the Sumerian Fajr al-Sulalat and Akadian periods.**
Surface Findings	**Not provided**

- Table # 60

Site # 60	KHAN al-NAMIL
Village	SDERA al-WOUSTA
Nahiya*	**Not provided**
Province	**al-SHARKAT**
District	**Not provided**
Surface	**125x75x6 m.**
Site Description	**Located in the "Shubh al-Jazirat in the area of Namil and is at 3.5 km from Tel al-Namil. The settlement includes uncut limestone and gypsum construction very likely square in shape of which only one triangle remains. Connected to it are three small Tels from the south and south east.**
Surface Findings	**ALL THE SURFACE FINDINGS DATE TO THE HATRA, PARTIAN AND SASSANIAN PERIODS**

- Table # 61

Site # 61	ASSUR
Village	Not provided
Nahiya*	**Not provided**
Province	Al-SHARKAT
District	**Not provided**
N.A.	
Site Description	**The ancient city of Assur is a historical site of great importance, and the site needs to be protected by a dam barrier to protect it from flooding.**
Surface Findings	**Not provided**

4.3 Other sites visited during the mission

On the occasion of the UNESCO assessment mission to Iraq in November 2002, the sites of Hatra, Nimrud, Nineveh, Samarra and al-Ukhaider were visited. Whereas Hatra is a World Heritage site since 1984, the other sites are on the Tentative List of Iraq as submitted to the World Heritage Committee in July 2000. The remaining two Iraqi sites on this list, Ur and Wasit, were not visited. The visits to the five sites helped to gain an overall impression about the layout and the state of preservation of the sites and their monuments. However, they did not include a systematic recording of single items or monuments.

1. Nimrud

During the visit to the site of Nimrud, the members of the mission were guided by Mr Muzahim Hussein, field director of excavations at the site. His explanations concentrated on the North-West Palace and its royal tombs and the remains of the temple of Ishtar.

The settlement of Nimrud, ancient Kalhu, has been shaped by the Assyrian king Assurnasirpal II who decided to transfer the Assyrian capital to this site during the Neo-Assyrian period in the early 9th century BC. There is evidence for preceding occupation at least from the Middle Assyrian period (14th-11th centuries BC) onwards and for post-Assyrian and Hellenistic settlement remains. Nimrud is one of the key sites for the archaeology in Assyria since the systematic exploration of the Assyrian culture started at this place. In 1845, it was Austen Henry Layard who excavated major parts of the North-West Palace. The walls of it were adorned with impressive limestone reliefs showing ritual scenes and military campaigns of the king. Many of these reliefs were brought to museums all over the world. A second period of exploration started in the late 40s of the 20th century when the British Expedition launched an excavation programme. It ran until the early 60s and was directed by M.E.L. Mallowan and later by David Oates. On the main mound (“citadel”), many substantial Assyrian public buildings were uncovered and, at the periphery of the site, the huge Fort Shalmaneser complex was excavated, the armatory of Nimrud. Activities in the lower town (ca. 360 ha) focused only on some spots. Further work was carried out by a Polish team in the 70s, the Italians in the late 80s, and the British in 1989, in parallel to Iraqi excavations. The most spectacular was the discovery of four royal tombs in the southern wing of the NW-Palace which belonged to Assyrian queens and royal women.

In the year 2000 excavations started at the area of the temple of Ishtar, east of the ziqqurrat. The entrance to the temple was adorned with protective figures made of limestone, known as “lamassu”, which are known from other Assyrian palaces and temples. The State Board of Antiquities launched a reconstruction programme for this part of the temple of Ishtar. The central entrance was rebuilt with mudbricks, and a vault made of concrete and bricks was placed on top of this entrance.

This reconstruction programme continues previous reconstructions and protective installations for the mudbrick architecture and the remaining limestone reliefs. Larger parts of the NW-Palace and the temple of Nabû have been reconstructed with roofings and mudbrick walls. Parts of the palace are roofed with traditional techniques, such as wooden beams and mats; others bear a glass and metal construction. The protective construction of the entrances to the throne-hall makes partly use of concrete. Recently, tin roofs have been placed above most of the limestone reliefs in order to protect them against erosion. Although many of the reliefs are not exposed to sunlight, rain and wind, it was noted that some of the protective roofs of the NW-Palace are in extremely bad shape and some of the rooms are used as shelter by birds. The protection of the reliefs is not always guaranteed - in spite of a severe guarding regime which has been established since the discovery of the graves in 1989.

Three publications on Nimrud have been issued recently, concerning the excavations of the British and the Iraqi archaeologists up to nowadays (Oates and Oates 2001) as well as the royal tombs (Damerji 1999; Hussein and Suleiman 1999/2000).

2. Nineveh

The city of Mosul, today the biggest town of northern Iraq, lying on both sides of the Tigris River, covers partially the ancient city of Nineveh, once the last Assyrian capital east of the Tigris River. Only some parts of this extremely large 650 ha site were visited by the mission. Mr Manhal Jaber, director of the excavations at Nineveh explained the archaeological exploration of the recent years.

As a site of eminent importance for the prehistory of Northern Mesopotamia, Nineveh obtained its fame by the Assyrian discoveries during the mid-19th century. Again, it was Layard who excavated Neo-Assyrian palaces both of Sennacherib and of Ashurbanipal of the 7th century BC. Whereas Sennacheribs SW-palace, the “palace without rival”, was adorned with limestone reliefs, the N-Palace of Ashurbanipal contained not only reliefs but also the famous library of the Assyrian king. Already in the Middle Assyrian period, was the city famous for its rich gardens. The exploration of Nineveh during the 20th century was less systematic than at Nimrud, with a British expedition around M.E.L. Mallowan and R. Campbell Thompson in the 30s. Since the 60s, Iraqi archaeologists launched an immense reconstruction and restoration programme, mainly focusing on the city’s fortification and its gates. Large parts of the city wall have been reconstructed with dressed limestone and some of the city gates were reconstructed with vaults. The Nergal gate shows the protective figures (“lamassu”). The reliefs which remained in place in the SW-Palace on Kuyunjik (the main mound) have been protected by the State Organisation of Antiquities and Heritage with a steel and tin construction, while the walls were reconstructed with mudbricks, and fragments of some of the sculptures were joined with steel elements. Intense

research was devoted to the SW-Palace during recent years (Russell 1991; 1998), drawing attention to the slow destruction of the remaining reliefs and the looting activities on the site. At the time of the mission, an Italian-Iraqi joint project had started aiming at recording the reliefs and their state of decay with modern techniques and at the smooth reconstruction of these parts of the SW-Palace.

The ekal masharti of Nineveh (the armatory) was excavated in the late 80s, south of Kujunjik, in a location called Nebi Yunis where an impressive mosque covers the western part of the mound. What has been excavated so far, in the late 80s, is the entrance of the ekal masharti which was, again, adorned by protective figures of limestone, not made of one block, but of several small stones. The inscriptions of these "lamassu" indicate that the building was erected during the time of Sennacherib. Large parts of the building lie under the present mosque, and it is therefore impossible to carry out further excavations. Moreover, the entire western slope of Nebi Yunis has been recently covered with a stepped stair construction and a street leading to the sanctuary. The entrance to the ekal masharti is exposed to weathering and damage, as the former roof does not exist any more and the fence has been removed.

Since a few years, the Iraqi government has launched a revival programme for the site of Nineveh and the library of Ashurbanipal. Its main goal is the creation of a centre for cuneiform studies on the area at the university of Mosul, as well as the production of copies of all the existing texts from the former library of Ashurbanipal located in museums all over the world.

3. Samarra

The site of Samarra is one of the most extended archaeological sites in Iraq. In Near Eastern studies, Samarra stands on the one hand for a Chalcolithic civilisation (Samarra complex), mainly known for its high quality pottery production, and on the other hand as a large Abbasid city and its extended palaces and mosques which flourished after the caliph al-Mu'tassim decided to move his capital from Baghdad to Samarra in 836 AD (cf. Northedge 2001a; cf. Al-Janabi 1983). At that time, the occupied area was 57 km^2. After two generations, Samarra ceased to be capital in 892 AD.

At Samarra, the mission visited the great mosque of al-Mutawakkil with its famous spiral minaret (Malwiyya), as well as the palace of al-Ashiq on the western bank of the Tigris River. The minaret and the external walls of the mosque's courtyard have been restored by the State Organisation of Antiquities by using the same building materials as for the original structures, i.e. baked bricks. During the 90s, a project was initiated aiming at reconstructing the courtyard of the mosque as to its original plan. This included the construction of hundreds of columns and pillars which, at a later stage, should have been covered with a roof. At present, work seems to have been interrupted and what is visible are the foundations and the bases of these columns (UNESCO 2003). Contrary to their predecessors of marble,

they are made of baked bricks and a steel-concrete construction. The problematic nature of these reconstruction techniques was discussed with Dr George from the SBAH who took part in the visit.

The al-Ashiq palace on the western bank of the Tigris was rapidly visited. During the 70s, this impressive building was reconstructed by the State Organisation of Antiquities and Heritage, reportedly according to the only remaining corner of original height which is preserved in the NE. In the upper storey the walls have been partly reconstructed and plastered.

4. The fortress of al-Ukhaider

The location of al-Ukhaider is ca. 50 km southwest of the city of Kerbela. This palatial building complex was possibly constructed in the late 8th century BC even though its exact date is discussed. Whether there even exist pre-Islamic origins is not yet clear (cf. Northedge 2001). The entire complex of al-Ukhaider measures 175 by 163 metres, surrounded by a pisé enclosure. The building complex itself is constructed of rough stone and gypsum mortar and the inner castle has an extension of 80 x 112 m.

After its rediscovery almost 100 years ago and some general surveying work, excavations were carried out by the Iraqi State Organisation of Antiquities and Heritage in the 60s. Extensive reconstruction work during the 70s and 80s resulted in an almost completed building where it appears difficult to identify original structures and reconstructed ones. However, before the reconstruction started, the building's original height was still preserved (Northedge 2001b).
Air strikes to an ammunition deposit close to the building in 1991 do not seem to have damaged the building (cf. UNESCO 2003).

5. Hatra

During the stay at the World Heritage site of Hatra, the inner part of the city was visited. The latest reconstruction work being carried out at the Ala'a temple was observed. Stone sculptures and frieses are reconstituted by the application of traditional craftsmanship and stonework. However, some concern can be expressed as regards the reconstruction methodology in light of internationally agreed upon conservation/restoration standards.

Concluding remarks

Due to short duration and character of the visits to the sites of the World Heritage Tentative List, it is only possible to draw some preliminary conclusions:

- As to the impressive Assyrian sites of Nimrud and Nineveh, it was discussed whether these sites should be nominated as single sites for the World Heritage List or whether they should be part – altogether with Ashur - of an ensemble of World Heritage sites assembled under the rubrique "Assyrian royal cities". However, before considering such an

option, a thorough analysis of all those elements pertaining to the criteria relevant for a nomination is necessary.

- Both the Islamic sites of Samarra and al-Ukhaider are unique monuments of this civilisation. Similar to the sites in Assyria, an evaluation will have to be carried out before further recommendations and decisions. Special attention is to be paid to any further developments of the reconstruction measures in the courtyard of the great Mosque at Samarra.
- Overall, the restoration methods and, most frequently, the reconstruction of the monuments implemented need to be further assessed, in view of their impact on the integrity and authenticity of the sites.

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4.4 Programme of the Mission

16 November	● Arrival of Dr Arnulf Hausleiter in Amman
17 November	● Arrival of Eng. Lucio Cavazza in Amman ● Preparatory meeting for the mission
18 November	●Departure from Amman and travel by car to Baghdad
19 November	● Meeting with the Minister of Education, H.E. Dr Fahad Salim Al-Shaqra, and members of the Iraqi National Commission ● Meeting with Dr Donny George, Director-General of Research and Studies at the State Board of Antiquities and Heritage ● Meeting with Dr Jaber Khalil Ibrahim, Chairman of the State Board of Antiquities and Heritage ● Courtesy visit to UNDP
20 November	● Meeting with Dr Donny George, Director-General of Research and Studies at the State Board of Antiquities and Heritage ● Visit of the National Museum ● Visit of the site of Tell Harmal
21 November	● Departure for the Makhoul Dam area, accompanied by Ms Khamael Hussein and Mr Loai Al-Omari from the National Commission, and Dr Donny George from the State Board of Antiquities and Heritage ● Visit of the dam's site supervision office and meeting with Mr Khaled Zeidan, site engineer responsible for the project ● Visit of six archaeological sites in the reservoir area, guided by Mr Burhan Shaker, director of the excavation project ● Night in Mosul
22 November	● Thorough visit of the site of Ashur, in the company of Dr Jaber Khalil Ibrahim ● Night in Mosul
23 November	● Visit of the sites of Nineveh and Nimrud ● Visit of the Mosul museum and other areas of the city ● Night in Mosul
24 November	● Visit of the site of Hatra, inscribed on the World Heritage List ● Visit of the mosque of Samarra ● Return to Baghdad

25 November	● Visit of Babylon ● Visit of the fortress of Al-Ukhaider
26 November	● Working session at the State Board of Antiquities and Heritage ● Meeting with Mr Mazen Al Hassan and Mr Salah Bezirgan from the Ministry of Irrigation and the Al-Furat Company ● Meeting with Dr Jaber Khalil Ibrahim
27 November	● Meeting with H.E. Mr Hamed Yussuf Hammadi, Minister of Culture ● Final working session at the State Board of Antiquities and Heritage ● Meeting with Mr Paolo Battino and Dr Carlo Lippolis from the Iraqi-Italian Institute of Archaeology
28 November	● Departure from Baghdad and return to Amman by car
29 November	● Departure of Eng. Cavazza and Dr Hausleiter

4.5 List of persons met

H.E. Dr Fahad Salim Al-Shagra
Minister of Education

H.E. Mr Hamed Yussuf Hammadi
Minister of Culture

Dr Muayed Damerji
Advisor to the Minister of Culture

National Commission for UNESCO
Mr Mohammed Rija Shlah, secretary general
Mr Loai Al-Omari
Ms Khamael Hussein

State Board of Antiquities and Heritage
Dr Jaber Khalil Ibrahim, Chairman of the Board
Dr Donny George, Director-General of Research and Studies
Dr Rabi'a Al-Qaisi, Director-General of Restoration
Dr Burhan Shaker, Director, Makhool excavation project
Mr Ferhan az-Azawi, Assistant field director in Ashur
Dr Manhal Jaber, Inspector of Antiquities for the Mosul province
Mr Abed Jero, Field director at Kartukulti Ninorta
Mr Muzahim Mahmoud Hussein, Field director of Nimrud
Mr Hazem Al-Najafi, supervisor of the restoration work of the Al-Lat temple in Hatra
Mrs Ilham Hashem, Field director of Babylon
Mr Abdel Hadi Mounem, archaeologist in charge of the northern palace in Babylon

Mr Khaled Zeidan
Site engineer responsible for the Makhool Dam

Mr Mazen Al-Hassan
Director General for Dams
Ministry of Irrigation

Mr Salah Bezirgan
Al-Furat Company
Ministry of Irrigation

Mr Francis Dubois
UNDP Resident Representative

Mr Paolo Battino
Dr Carlo Lippolis
Iraqi-Italian Institute of Archaeology

COALITION PROVISIONAL AUTHORITY
Ministry of Culture

From: Ambassador Pietro Cordone –Senior Advisor

World Heritage Committee
UNESCO
Paris 25 June 2003

ASHUR

As you will be aware, in the absence of an Iraqi Government, the Coalition Provisional Authority (CPA) is the interim administration for Iraq. Matters pertaining to my Ministry are discussed by a Cultural Cabinet that comprises designated Iraqi advisors and advisors from the coalition. The Cabinet is consequently the ultimate decision making body for issues relating to culture and heritage in Iraq today.

This letter confirms a decision taken by the Cabinet that at the Paris meeting of the World Heritage Committee at the end of June the Committee should proceed with inscribing Ashur onto the World Heritage List. The Cabinet as also agreed that simultaneously Ashur should be entered on the 'in danger' list.

The immediate threat to Ashur from dam construction no longer exists under CPA administration but we cannot vouch for decisions that might be taken by our successors. Listing Ashur as 'in danger' is a strong signal to a future Iraqi administration of the importance of preserving this wonderful site for the world.

I will pass a signed copy of this letter to the UNESCO delegation I am to meet here in Baghdad on Saturday 28 June.

Pietro Cordone
Ambassador
Senior Advisor – Culture

Ashur (Iraq)

No 1130

1. BASIC DATA

State Party Iraq

Name of property: Ashur (Qal'at Shergat)

Location: Salah Addin Province

Date received: 18 October 2002

Category of property:

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is an archaeological: *site*.

Brief description:

The ancient city of Ashur is located on the Tigris River in northern Mesopotamia. The city has its origins in the 3rd millennium BCE. It was the first capital of the Assyrian empire from 14th to the 9th centuries BCE. Ashur was also the religious capital of the Assyrians, associated with the god Ashur. The city was destroyed by the Babylonians, but revived during the Parthian period in the 1st and 2nd century CE. At present, this archaeological site is threatened by the construction of a dam some 30-40km downstream.

2. THE PROPERTY

Description

The site of the ancient city of Ashur (Assur, modern Qal'at Sherqat) is located 390 km north of Baghdad. The settlement was founded on the western bank of river Tigris, on uneven bedrock; within its walls it covers the area of about 65 ha. The excavated remains consist of numerous superimposed stratigraphic levels of archaeological deposits. The earliest of them date to the Sumerian Early Dynastic period of the early 3rd millennium BCE. After the Akkadian and Ur III periods, which are present at some points, follow the Old, Middle and Neo-Assyrian periods, the later one ending at the mid-first millennium BCE. Finally, Hellenistic remains and those of the Arab Hatrian kings are attested. Structurally, the city of Ashur was divided into two parts: the old city (Akkadian *libbi-ali*, the heart of the city), which is the northern and largest part of Ashur, and the new city (Akk. *alu-ishshu)*, a smaller southern projection in the city, which was constructed around the middle of the second millennium BCE.

The major features of the city which are presently visible on-site consist of architectural remains (some of them partly restored): the *ziggurat* and the great temple of the god Ashur, the double-temple of Anu and Adad (with the remains of two smaller *ziggurats)*, the temple of Ishtar, the Sumerian goddess of love and war, the Old Palace with its royal tombs and several living quarters in many parts of the city. Some parts of the Parthian palace are visible at the border between old and new city. The double-temple of Sin and Shamash has almost disappeared. The same is valid for the Assyrian New Year's festival building *(bit akitu)*, which is located outside the walls of the city. Living quarters with indoor-burials and a palace area in the northern centre of the city are being excavated. The city was surrounded by a double wall with several gates (the new city just by a single wall) and a big moat.

The majority of the buildings of the city were built with sun-dried mud-bricks with foundation of quarry stones or dressed stone, depending on the period. Artistic objects and parts of architectural remains of the city are at present on display in the major museums of the world, in the Louvre, the British Museum, the Pergamon Museum in Berlin and the Metropolitan Museum in New York, as well as in other museums. The surface of the site is partly covered by the excavation debris from several generations of archaeological excavations.

History

The history of the city of Ashur goes back to the Sumerian Early Dynastic period (first half of the 3rd millennium BCE). Some remains may even date to preceding periods. For this early part the stratigraphic excavation of the temple of Ishtar provided substantial information about the development of the religious architecture. Two of the five major building stages of it belong to this period. During the Akkadian empire (ca 2334-2154 BCE) Ashur was an important centre, and a governor of the third dynasty of Ur (2112-2004 BCE) ruled over the city which had to pay taxes to the central administration in the south. Still, the temple of Ishtar and its findings remain the main archaeological reference point. As an independent city-state Ashur became capital of Assyria and the Assyrians during the 2nd millennium BCE starting with the Old-Assyrian rulers Erishum, Ilushuma and Shamshi-Adad I and thereafter with the Middle-Assyrian kings Eriba-Adad I and Ashuniballit I. From here, the military campaigns of the Middle-Assyrian kings Tukulti-Ninurta I and Tiglathpileser I started and laid the foundation for the territorial expansion of the Assyrian empire to the west, ie Syro-Mesopotamia and the Levant, and other adjacent regions. For the 2nd millennium BCE a systematic building programme is attested for Ashur, culminating in the Middle-Assyrian period, when king Tukulti-Ninurta I not only renovated or reconstructed the majority of the temples (among them the temple of Ishtar), but terraced a large area for the his New Palace (the building was not erected since the king founded a new residential city named Kar-Tukulti-Ninurta, further upstream).

Ashur remained political capital until the reign of the Neo-Assyrian king Ashurnasirpal II (883-859 BCE), who moved it to Kalhu (modern Nimrud). After that, Ashur continued to be an important religious and provincial Assyrian centre even though it had lost its function as national capital. The Neo-Assyrian kings executed restoration work at the main sanctuaries and palaces of Ashur as it was requested by the inscriptions of their predecessors and erected the royal burial place within the area of the Old royal palace. The majority of the private houses and living quarters date to this Neo-Assyrian period and provide important information about domestic architecture and the conditions of life of those parts of the Assyrian society not belonging to the royal elite. Special

attention was received by the more than 1,000 inhumations in graves and tombs, mainly located inside the buildings, which provide important information on aspects of burial rites and funerary culture. The site survived the fall of the Assyrian empire in the 7th century BCE, and it flourished in the Hellenistic and Parthian periods until the 2nd century CE. The Parthian palace and a temple close to the *ziggurat* are architectural testimonies of this period. Presently, residential areas of the Parthian period are being excavated.

Management regime

Legal provision:

The area of the ancient city of Ashur has been the property of the State of Iraq since 1935. In the past, the site was protected under the Law of Antiquities of 1937, and its further amendments. Currently, the site and its buffer zone are protected under the recently revised Law of Antiquities and Heritage, no. 55, dated October 2002.

Management structure:

The protection and management of the site is the responsibility of the State Board of Antiquities and Heritage (former Directorate General of Antiquities). Locally, the archaeological site is under the responsibility of the Inspector of Antiquities in the province of Salah Addin. Excavations are conducted by the Department of Excavations and Archaeological Investigation in the State Board of Antiquities and Heritage, Ministry of Culture. The site has 10 guards in charge for its protection.

Resources:

Excavations by the Iraqi expedition are financed annually from the central budget of the State Board of Antiquities and Heritage, Government of Iraq. The *Deutsche Forschungsgemeinschaft* has financed the German expedition. At the moment there are no funds for restoration and conservation facilities or for training.

There are ca 1,000 visitors per year. Until 1991, there was a site museum in a military barrack. At the moment there are practically no facilities for visitors.

Justification by the State Party (summary)

The city of Ashur is the first capital of the Assyrian empire and the religious centre of Assyria, the core of which is located between Ashur, Nineveh and Erbil. The singular settlement was founded in a specific geo-ecological zone, ie at the borderline between rain-fed and irrigation agriculture, at the intersection between nomadic and sedentary subsistence strategies. The city gained its reputation because it was the city of the god Ashur, the national deity of the Assyrians. … Ashur played a key role as the centre of political power for the foundation of the Assyrian empire in the Middle Assyrian period (14th-11th BCE) and for Assyrian art and craftsmanship, retaining its importance as the main cult site even later. … It was also the place where the Assyrian kings were crowned and buried. As one of the few archaeological multi-period sites in Assyria of its kind, remains of the buildings and their furnishing have been extensively excavated. The architectural and artistic record is accompanied by a large corpus of cuneiform texts which attest a leading role of Ashur in religion and scholarship, especially during the Middle and Neo-Assyrian periods.

Criterion iii*:* During its history of three millennia, the most important step at Ashur was certainly the establishment of the Assyrian civilisation. The strong tradition in the material, religious and intellectual culture of Assyria remains connected to the site and its region. As to the space use and urban layout, most significant is the concentration of public buildings at the periphery of the city, the development of the specific Assyrian temple ground-plan and of the palatial architecture, its decoration, monumental art and furnishing. These elements became the standards for the other urban and provincial centres during the Middle and Neo-Assyrian periods, that is, for a time span of more than seven centuries. At Ashur, the early steps towards a systematic shaping of Assyrian cities could be observed for the first time within the limits of an extremely restricted space and a grown urban system, this in contrast to all the later Assyrian capitals. The tight and complex cultural identity is expressed by the fact that the land, the god and the city bore the same name: Ashur. It is clear that, already during pre-Assyrian periods, the site played an important role in the land of Subartu, since it was a desired place for foreign control over the region during the Akkad and Ur III periods (last quarter of the 3rd millennium BCE).

Criterion iv*:* Ashur has an outstanding density of excavated architectural remains from different parts of the Assyrian periods without comparison. The ensemble of public buildings (temples, palaces, city walls) finds its counterpart in several areas of domestic architecture. As for the religious architecture, the presence of three *ziggurats* erected of mud bricks and two double temples should be mentioned as well the temple of the national god Ashur. Of them, the impressive ziggurat of the god Ashur is still standing today and is a visible landmark. Whereas these buildings embody the Assyrian architectural tradition, the temple of Ishtar alone features a different building tradition (bent axis), which has its origin possibly in the area southeast of Assyria. At two places a sequence of royal palaces was observed, one of them saved later as burial place for Assyrian kings.

3. ICOMOS EVALUATION

Actions by ICOMOS

The ICOMOS evaluation has been referred to the mission organised by the UNESCO (World Heritage Centre, Division of Cultural Heritage, Amman Office) to Iraq, 18-28 November 2002, involving a hydraulics engineer and an archaeologist to assess the impact of the construction of the Makhool Dam currently underway on the Tigris River. The mission was considered positive and encouraging, and a good collaboration was established with the authorities re the identification of the cultural issues on the site of Ashur and in the region concerned. Nevertheless, the experts were not provided with technical information regarding the Makhool Dam itself and its environmental impact. Therefore it was not possible to make a full assessment of the specific risks faced by the archaeological site, nor of the interventions that would be required.

Conservation

Conservation history:

The site has been abandoned for nearly two millennia, major incursions having come only from archaeological excavations. In 1903-1914, the German expedition carried out excavations particularly in the northern section of the site and on the defence walls. In the late 1970s the State Board of Antiquities and Heritage of Iraq resumed the archaeological excavations and carried out some restoration to maintain and strengthen what had been exposed so far, ie the city wall, the Tabira-Gate, some private houses, the temple of Anu and Adad, the Old Palace and the royal burial. A large part of the town still remains unexcavated.

Currently, Iraq is implementing extensive agricultural and economic plans, which involve the construction of a large dam on the Tigris River some 30-40 km downstream from the archaeological site of Ashur. The construction of the dam is expected to be completed in 2006, and the level of water would then cover the lower parts of the archaeological site of Ashur and its surroundings.

State of conservation:

The photographs indicate that subsurface stratification and structures were in good state of preservation when first encountered in excavation at the beginning of the 20th century. Nevertheless, the excavated structures were left open, remaining exposed to erosion by rain and winds and normal natural destruction. The excavated area contains mainly public buildings. A large part of the town, probably mainly residential, still remains unexcavated.

Management:

The responsibility for the site management lies with the government authorities. However there is no management plan, neither regarding the excavation and restoration of the site, nor regarding the visitor management and environmental control. There are no facilities for the presentation of the site nor for the reception of visitors.

Risk analysis:

The main risk at the moment is presented by the dam construction some 30-40 km downstream, expected to be completed by 2006, after which the basin would be filled with water. The archaeological site of Ashur remains within the perimeter of this reservoir, though a major part of the walled city area is on higher ground. Nevertheless, once the basin has been created, especially the southern part of the city would be flooded for certain periods of the year. In any case, the archaeological remains would suffer from infiltration and seepage of underground waters. The water-bearing (phreatic) levels in the foundations of the whole area are expected to rise considerably.

Another problem is presented by the fact that the excavations so far have mainly focused on the main sites in the area. Only quite recently, there has been some attention to the archaeological resource of territory as a whole. In fact, it is estimated that some 63 archaeological sites would remain within the area of the water reservoir. Most of these are small, and many are in poor condition due to damage from agricultural and construction activities. Nevertheless, the UNESCO report emphasises that the sites represent an important information source in order to obtain a balanced and more comprehensive understanding of the history over the past several millennia. It is only some 30 years that regional settlement analysis has changed the archaeological view of Ancient Mesopotamia, recognising the "significant role of the systemic interaction between urban centres and rural settlements, and contributing to a better understanding of the emergence of states, the economic, social and environmental relations, subsistence patterns and modes of production and trade through time". The report also notes that the impact of the rise of the Middle Assyrian and Neo-Assyrian empires on the immediate surroundings of Ashur and Kar-Tukulti-Ninurta has not been studied. In fact, it is understood that only small areas (perhaps only 1%) of the Mesopotamia has been studied so far.

Regarding the Ashur site, the UNESCO report presents three possible scenarios:

1. No retaining wall is constructed to protect Ashur. This is the worst scenario, and the site would be flooded and infiltrated from 2006 on. This scenario will require an urgent programme of salvage archaeology and documentation in and around the site.

2. A retaining wall is constructed separate from the site. This is the least bad scenario. In this case, the salvage programme could focus only on areas directly affected by the water reservoir.

3. A system of protection is constructed directly on the borders of the site. This is the most cost-effective protection as discussed by the Iraqi authorities. It would involve a retaining system that makes use of the actual topographic situation of the areas bordering the reservoir, ie the eastern and northern fronts of the site. The structure could be built of earth, and use so-called 'gabions' (small stones held together by a wire-network) to protect the surface.

While no decision has yet been taken, it is possible that the solution to be adopted would follow the third scenario, ie the most cost-effective, even though this would not necessarily be the least bad solution.

At the time of writing this evaluation, the region of Ashur is in war zone, and therefore extremely vulnerable to destruction. In fact, archaeological heritage, even though partly indicated in maps, is often not even visible, apart from remains that still survive above ground.

Authenticity and integrity

The site of Ashur had been abandoned at the end of the Parthian period (2nd century CE), and, contrary to many other sites in the region, there was no further occupation. Therefore, the authenticity of the remains is high. The nomination dossier mentions two structures built in the 19th and 20th centuries, ie Ottoman military barracks at the north-eastern edge of the site. A site museum was located here until 1991. There is also the building of the German expedition, as well as two small guard's houses.

As for restoration works, the nomination dossier reports that traditional techniques and materials (mud-bricks and plaster) have been applied in the 1980s for partial reconstruction of the Old Palace, the temple of Anu and Adad, and parts of the city wall. The reconstruction has

been based on the excavated evidence. The walls stand up to a height of ca 2 m. Baked bricks have been used for the Tabira gate, the temple of Ishtar and parts of the Parthian palace. Gypsum and some concrete have been used in mortars.

Comparative evaluation

The Mesopotamian region is a cradle of civilisation, where several cultures have followed one another and built on each other's achievements, including the Sumerian, Akkadian, the third dynasty of Ur, Babylonian, Elamite, Assyrian, and Persian. Together with Kalah (Nimrud), Dur-Sharrukin (Khorsabad) and Nineveh, Ashur was one of the four capitals of the Assyrians and the first of these. It is considered the only example of an urban site where continuity and change of the Assyrian civilisation pertaining to religious, public and domestic architecture, artistic production, urban planning, religious and political systems, economic subsistence and social patterns is revealed by the archaeological and textual evidence throughout the recorded archaeological periods.

In terms of historical importance and cultural impact, Ashur can be compared with ancient capitals such as Babylon, Ur, Thebes, as well as Susa, and Persepolis. No sites representing the Assyrian civilisation have been inscribed on the World Heritage List so far. The closest reference is Tchoga Zanbil (WH 1979), in western Iran, the sacred city of Elam, founded c. 1250 BCE.

Outstanding universal value

General statement:

The significance of the city of Ashur is related to its being the first capital of the Assyrian empire. It was also the religious centre of Assyria, being associated with the god Ashur, the national deity of the Assyrians. Historically, Ashur played a key role during the foundation of the Assyrian empire in the Middle Assyrian period, and for the development of Assyrian art and crafts. It retained its importance as the main cult site even later, and was the crowning and burial place for Assyrian kings. Apart from architectural and artistic records, a large corpus of important cuneiform texts has been discovered on the site. The major pieces found on the site are now displayed in various major museums abroad.

Evaluation of criteria:

The nomination dossier presents the site under ***criteria iii*** and ***iv***:

Criterion iii*:* is certainly relevant in the case of Ashur as an exceptional testimony to succeeding civilisations from the Sumerian period in the third millennium BCE to the Assyrian empire from the 14th to 9th centuries, and, later, the Parthian revival in the 2nd century BCE. The city has also been strongly associated with the identity of the Assyrians, and the name Ashur has been associated with the god, the city, and the land.

Criterion iv*:* the site, both on the basis of its visible structures and the structural remains excavated, presents plentiful evidence of being an outstanding example of a type of architectural ensemble illustrating significant states in human history over some millennia.

4. ICOMOS RECOMMENDATIONS

Recommendation for the future

ICOMOS strongly recommends that protection in the area of Ashur should be extended from the excavated site to the surrounding territory, which will certainly contain extremely valuable and relevant information to the understanding of the whole region.

Secondly, ICOMOS recommends that a management regime be properly organised and implemented for the site of Ashur and its context as soon as possible.

With reference to the findings of the UNESCO mission to Ashur in November 2002, ICOMOS further recommends that:

- Iraqi authorities launch an invitation to archaeological expeditions on an international level to participate in the salvage excavations and studies of the Makhool Dam reservoir area;

- a coordination centre for the archaeological research in the area of Ashur be established with the support of UNESCO and the World Heritage Fund;

- an integrated approach be applied, combining on-site and off-site research, based on archaeological survey strategies, archaeological excavations, and the use of scientific methods of analysis;

- the necessary technical information on the Makhool Dam construction and its environmental impact be provided by the Iraqi authorities to UNESCO and its specialists as soon as possible, as a necessary condition for appropriate measures to developed for the safeguard of Ashur and the territory affected by the dam construction.

Recommendation with respect to inscription

ICOMOS recognizes the outstanding universal value of Ashur, and despite the current lack of management systems, considering the exceptional circumstances, recommends that the site be inscribed on the basis of ***criteria iii*** and ***iv***:

Criterion iii*:* Founded in the 3rd millennium BCE, the most important role of Ashur was from the 14th to 9th century BCE when it was the first capital of the Assyrian empire. Ashur was also the religious capital of Assyrians, and the place for crowning and burial of its kings.

Criterion iv*:* The excavated remains of the public and residential buildings of Ashur provide an outstanding record of the evolution of building practice from the Sumerian and Akkadian period through the Assyrian empire, as well as including the short revival during the Parthian period.

Consideration should also be given to inscribing the site on the World Heritage in Danger List.

ICOMOS, March 2003