

# GIRD-I GULAK. A NEO-ASSYRIAN FORT ON THE EASTERN FRONTIER OF ASSYRIA. A SALVAGE PROJECT BY THE DANISH ARCHAEOLOGICAL EXPEDITION TO IRAQ.

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## Introduction

The Danish Archaeological Expedition to Iraq (DAEI) has been working on the Rania Plain in northern Iraq since 2012, undertaking survey work across the plain and excavating a number of sites (Gird-i Gulak and the twin sites of Babukur). Recent work has focused on Gird-i Gulak, where the project has recovered significant Neo-Assyrian occupation; occupation that points to a substantial and well defended local administrative centre, with probable dual city walls and evidence of monumental public space, a substantial foundation platform and drainage systems. Although relatively small, Gird-i Gulak probably typifies a local node of control in this part of the Neo-Assyrian Empire. It was likely a strategically placed node lying within a regional administrative network and probably located at, and managing, intersections of communication and exchange routes traversing the Rania Plain. The plain itself is geographically distinct with restricted points of access and thus controllable. Gird-i Gulak was possibly part of the military consolidation during the Neo-Assyrian period seen with the construction of a number of strongholds important for the security and management of this transitional border zone in the hills along the western flank of the Zagros Mountains. However, the site like many others on the plain is threatened cultural heritage and is being badly damaged by persistent modern processes.

This paper briefly discusses DAEI's work on the Rania plain, the historical and geographical context in which the work is embedded, the present threat to cultural heritage and the preliminary results of archaeological salvage work conducted at Gird-i Gulak. There is a short discussion of the results and their implications for our understanding of the site's role within the Assyrian borderlands.

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# Background

A decade of archaeological work in the Kurdish region of northeastern Iraq has resulted in a better understanding of occupation in this region during the Neo-Assyrian period (c. 900-600 BC), with evidence suggesting the Zagros foothills were a strategically important region for the Assyrian empire. Textual records document Assyrian presence in the Zagros foothills dating back to the Old and Middle Assyrian periods, and it is likely most of the Zagros foothills were incorporated into the Neo-Assyrian empire as early as the late 10th or early 9th centuries BC.<sup>41</sup> The region appears to have played an important role in not only safeguarding the empire's eastern frontier, but in also supplying goods and water for the empire's urban centres and as a base for Assyrian eastward expansion against the polities of the Iranian Zagros.<sup>42</sup> The Neo-Assyrian incorporation of the Zagros mountain foothills had a substantial impact on settlement numbers and patterns. This is reflected in the archaeological record, with recent surveys in the Zagros foothills showing a settlement peak during the Neo-Assyrian period.<sup>43</sup>

New archaeological and textual evidence from the plains of Peshdar and Rania, located in this region at the foot of the Zagros mountains of northeastern Iraq, suggests the plains became part of the empire during the Middle Assyrian period and again during the beginning of the Neo-Assyrian period.<sup>44</sup> New evidence indicates the region was of significant strategic importance for the Assyrian empire and became a well-defended and densely settled frontier zone.<sup>45 46</sup>

Within this broader historic landscape lies Gird-i Gulak. Excavations by DAEI point towards the site being a Neo-Assyrian administrative stronghold for an extended period and probably a small, but significant centre on the Rania Plain. Our research supports textual evidence indicating that the region was part of the Neo-Assyrian frontier zone and a subject of the Neo-Assyrian political and administrative horizon. By placing DAEI's results into this framework, we can better comprehend the overall administrative and cultural complexities of the Assyrian presence in the Zagros foothills and the specificities of the Neo-Assyrian state, such as its organisation and the defence of its eastern frontier.

## The Peshdar and Rania plains

The foothills and mountains of the Zagros make for a striking landscape. On first inspection, the high mountains and rocky terrain give the impression of a massive, impassable natural barrier separating the Iranian plateau from the large plains of Iraq. A closer look reveals that numerous valleys, rivers and waterways, shallow gorges and passes transect these mountains (Figure 1). Historical accounts of the Zagros Mountains detail routes through a diverse and complex landscape (Figure 2).<sup>47</sup>

<sup>41</sup> LIVERANI 2004; MIGLUS 2016; MACGINNIS et al. 2020. See also ALTAWHEEL et al. 2012, 12-13.

<sup>42</sup> FALES and FABBRO 2016; KÜHNE 2018.

<sup>43</sup> Ur et al. 2013, Figure 15; Morandi BONACOSSÌ – IAMONI 2015, Figure 8; SKULDBØL – COLANTONI 2016b; KOLIŃSKI 2017, 2019 and 2020.

<sup>44</sup> For a historical summary of the region see MACGINNIS et al. 2020, 2-3; MACGINNIS, SKULDBØL – COLANTONI forthcoming. See also EIDEM 2018 and 2020.

<sup>45</sup> RADNER et al. 2016; COLANTONI 2018 et al.; MACGINNIS et al. 2020; papers in this volume.

<sup>46</sup> Data presented at the 10th ICAANE (2016) conference in Munich by the Sulaimania Governorate Archaeological Survey (MAFGS) supports survey work undertaken by DAEI on parts of the Rania Plain, also recording a dense Neo-Assyrian settlement pattern on the Peshdar and Rania plains.

<sup>47</sup> See WILSON 1895; SPEISER 1928; LEVINE 1973.



*Figure 1.* Upper aerial drone photograph shows the northern part of the Rania Plain and Lake Dokan. Lower photograph shows the hilly landscape on the western edge of the Rania plain. Photos: Henrik Brahe and Tim Skuldbøl 2015.



Figure 2. The foothills of the Zagros Mountains and likely communication routes (in red) during the Neo-Assyrian period, based on Levine 1973: Fig. 2 (compiled by Carlo Colantoni).

The twin plains of Peshdar and Rania are small, fertile valley plains enclosed by mountains, steep rolling hills and rock outcrops. Numerous small springs and waterways made the plains ideal for settlement in the past. Archaeological and historical records provide evidence that important communication routes traversed the plains. Visibility across both plains is notable, with sites prominent in the landscape. There are few access points to the plains and controlling the transit routes and access points were vital for any polity residing there. Linking the two plains is the Darband-i Rania corridor: a major but narrow transit point. Originating in the Zagros mountains of Iran, the Lower Zab river flows across the Peshdar plain, through the Darband-i Rania corridor before traversing the Rania Plain and the plains further south, until it finally joins the Tigris River.

The corridors and transit routes of the Peshdar and Rania plains are important in understanding this region's historical development over time. Major archaeological sites are located on either side of the Darband-i Rania pass which divides the two plains, these include: Bazmusian, Qalatqa Darband and Shemshara on the Rania Plain, and Qaladze and Qalat-i Dinka on the Peshdar plain.

DAEI has recently begun to investigate the role of the Zagros foothills in cross-cultural interaction and the development of indigenous societies. It appears that valleys and river plains within the Zagros mountains – located at intersections of communication and exchange routes – may have at times acted as special zones or interaction hubs encompassing cultural and economic exchange. This characteristic of the plains has been noted for the Late Chalcolithic period (4500-3100 BC).<sup>1</sup> It is likely that this is also true for the Neo-Assyrian and other periods.

## DAEI's work on the Rania Plain<sup>2</sup>

DAEI is an international cross-institutional collaboration between the National Museum of Denmark and University of Copenhagen. The project is directed by Tim Skuldbøl, Carlo Colantoni and Mette Marie Hald. DAEI studies the anatomy and diversity of urbanism in Mesopotamia, and is investigating the impact of cross-regional interaction on urban development across the Zagros Mountains. In addition, the project contributes to the management of cultural heritage in Iraq through survey and salvage excavation of archaeological sites on the Rania Plain (Figure 3).

DAEI has been working on the Rania Plain since 2012 and has undertaken eight seasons of research. The project is investigating three sites: Babukur, Bazmusian and Gird-i Gulak. All three sites are located in the flood zone of Lake Dokan and are under severe risk of destruction.

Between 2012 and 2015 we investigated early urban development at the Late Chalcolithic (LC) period twin sites of Babukur. From 2016 to 2019 we were concerned with salvage work of the LC and Iron Age remains at Gird-i Gulak. Survey work (the Rania Plain Survey Project) was undertaken between 2013 to 2016 in the central and western part of the flood zone on the plain. It identified two major settlement peaks: one during the LC Period and the second in the Iron Age. The latter is mainly dated to the Neo-Assyrian period.<sup>3 4</sup>

In 2019 DAEI, in collaboration with the University of Kurdistan in Iran, began a survey and excavation project in the regions of Baneh, Mirabad and Sardasht in Iran. These regions are located about 50 km east of the Rania plain. DAEI is also collaborating with the Marivan Plain Archaeological Project, which has undertaken a survey in the Iranian region of Marivan – lying about 140 km to the southeast of the Rania plain.

<sup>1</sup> See SKULDBØL – COLANTONI 2020 and 2021.

<sup>2</sup> For a summary of previous and contemporary investigations on the Peshdar and Rania plains, see SKULDBØL – COLANTONI 2016; COLANTONI et al 2018.

<sup>3</sup> See SKULDBØL – COLANTONI 2016a and 2016b.

<sup>4</sup> Evidence from Iraqi survey in the 1950s also points towards major occupation peaks in the Late Chalcolithic and Iron Age periods, with about 30 sites dating to the Middle and Late Assyrian periods (see Al-Sooif 1970).

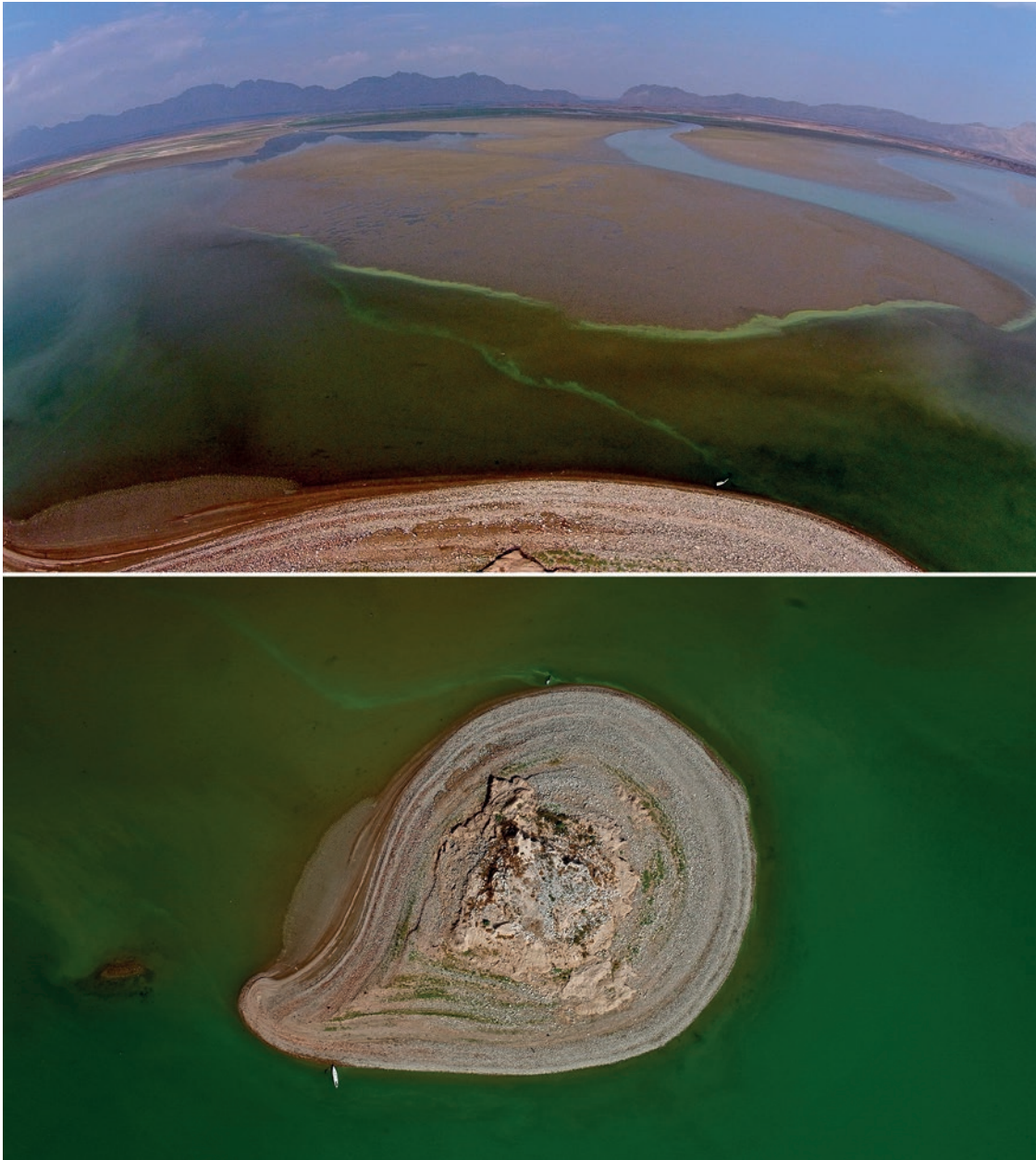


Figure 3. DAEI uses a multi-scalar methodological approach that employs high-resolution surface survey, remote-sensing (satellite and drone photography), surface scraping, high-definition sampling strategies, geological coring, and targeted soundings and excavation. Photos: Henrik Brahe 2016.

### Cultural heritage under threat

Archaeological sites on the Peshdar and Rania plains are endangered. Over the last few decades these plains have experienced a profound change in the state of preservation of their cultural heritage. Many archaeological sites on the plains are under intense pressure from modern urban and infrastructural development, farming and the construction of fish ponds and chicken farms, and the environmental consequences from the construction of a large hydroelectric dam (Dokan Dam) in the late 1950s. These factors threaten to destroy hundreds of archaeological sites. Many of these sites lie in the flood zone of the dam's reservoir (Lake Dokan). Water action during the lake's annual rise (in spring and early summer) and decline (in late summer and early winter) is very destructive; exposing and removing archaeological deposits at sites across the plain at an alarming rate (Figure 4).<sup>5</sup>

<sup>5</sup> See SKULDBØL – COLANTONI 2014; EIDEM 2020; UILDRIKS 2020.



*Figure 4.* Drone images showing the Lower Zab river during a year in which the lake contained less water than normal (top), and the heavily damaged site of Bazmusian (bottom). Photos: Henrik Brahe 2015.

During the course of our field seasons we have inspected and assessed a number of sites on the Rania plain under threat of destruction both inside and outside of the flood zone. We estimate the time available to record and investigate sites is rapidly diminishing. At the present rate of erosion and damage by human activities there may only be a few years before a substantial proportion of many sites will have been eradicated. Sites lying in the flood zone cannot be physically protected (any protective work would be prohibitively expensive and most likely be washed away) and we judge the best approach to recording the historical significance of these sites is a series of extensive rescue excavations to detail cultural material and deposits whilst they are still relatively intact. Alternatively, a less demanding

strategy may be one of annual inspections and the frequent recording of exposed remains and sampling of surface material. Although survey work has identified and dated the majority of these sites, immediate action is necessary in order to investigate and record the exposed archaeological remains visible on sites across the plain. We probably only have a small window of opportunity to start basic salvage operations before this ancient landscape is lost. Such work would be an important contribution to safeguarding and recording Iraq's less prominent cultural heritage.

Bab, Babukur South and Lower Warankah - located 400 m apart - are three of these sites under threat. With recently exposed extensive remains, including monumental buildings and numerous archaeological features, they have now been recorded (Figure 5).



*Figure 5.* UAV/Drone photos of endangered sites along the edge of Lake Dokan. Upper photo shows Babukur South with the exposure of a huge palace-like building. Lower left photo shows the site of Lower Warankah, west of Bab. The site is slowly being eroded by Lake Dokan and archaeological features (pits, kilns, pots and graves) have been exposed across the site. Lower right photo shows the site of Bab; the waters of Lake Dokan have exposed the remains of an LC settlement. UAV photos: Henrik Brahe 2013-15.



## Gird-i Gulak

The site of Gird-i Gulak (also known as Kullak, N 36.194027, E 44.888895) lies about 5 km south of the modern city of Rania. A paved road running directly east-west connecting the two entrance points either side of the Rania Plain passes about 2 km to the north of the site. It is likely a link between the eastern and western entrances to the plain following a similar route may have existed in the past, placing Gulak in a strategic location within a communication network stretching across the plain.

Gird-i Gulak itself is a small-to-medium size mound around 4-5 ha in size. It consists of a high mound rising about 15 m above the plain and a lower, elongated saddle (Figure 6). Natural springs located next to the site offer a favourable environment for human occupation and probably drew the initial inhabitants in the LC period to the location.



*Figure 6.* Gird-i Gulak on the edge of the Lake Dokan flood zone. Upper photo shows Gird-i Gulak in autumn 2018 and bottom photo shows the site in autumn 2019. Photos Tim Skuldbøl 2018 and Henrik Brahe 2019.

## Archaeological work at Gird-i Gulak

Archaeological investigations at Gird-i Gulak were first undertaken by the Iraqi Antiquities Department in the 1950s, prior to the construction of the Dokan Dam. A regional survey of sites, recording ancient settlements to be impacted by the soon to be built dam and its reservoir, noted occupation at Gird-i Gulak dating to the prehistoric, Assyrian, Median and Islamic periods.<sup>6</sup> In addition, the Iraqi Antiquities Department placed a large sounding on the northern side of the site, the outline of which is still visible today. Unfortunately, the results were never published.

We began work at Gird-i Gulak in 2016 with the aim of investigating organisational aspects of early urbanism and the specialised use of the landscape during the LC period. A strategy of targeted surface collection, 31 soundings and 18 soil cores allowed us to explore the human and physical topography of the site and its surroundings.<sup>7</sup>

We have recovered evidence of substantial LC, Iron Age (predominantly Neo-Assyrian), and late Islamic (Ottoman) period occupation at the site. Sampled pottery from the surface of Gird-i Gulak also indicates a possible Middle Assyrian use of the site. Gird-i Gulak was originally founded on a natural rise and this rise was used as a quarry and dump in the early LC period. Investigations identified a 'halo' of extensive and specialised off-site human activities surrounding the site dating to the LC and Iron Age periods.<sup>8</sup> In light of the current evidence, we estimate that the central mound and surrounding areas form a conglomerate of past human activities encompassing in total around 15-20 ha. Furthermore, our intensive survey of the portion of the plain identified - at a distance at about 500-800 m from Gird-i Gulak - an outer halo of smaller satellite mounds. Together with Gird-i Gulak, these form a cluster or several clusters of sites (Figure 7).



<sup>6</sup> AL-SOOF 1970.

<sup>7</sup> See SKULDBØL – COLANTONI 2018a: Figure 3 for the location of 2016-17 corings and soundings.

<sup>8</sup> See SKULDBØL – COLANTONI 2018.



Figure 7. Satellite images of Gird-i Gulak. Highlighted are areas of settlement or past human activities around Gird-i Gulak identified by DAEI (Corona and WorldView-2 images). Image compiled by Tim Skuldbøl.

## Slow destruction

An important element of our investigations at Gird-i Gulak is the yearly assessment of the damage done to the site by human activities and natural actions.

Gird-i Gulak is in a poor state of preservation, with the site slowly being destroyed over time. Before the construction of the Dokan Dam a Kurdish farmstead or hamlet lay on the western part of the mound. On the eastern side and summit of the mound numerous Islamic burials (burial pits and cist graves) were found on the surface and in excavations. Later, following the abandonment of the site in the late 1950s, farming activities (including bulldozing to flatten the mound), random looting and pitting, and recurrent flooding by the waters of Lake Dokan caused severe damage to the site.

Years of damage have resulted in extensive remains being exposed and objects being found on the surface of the mound or out of context in erosional deposits. The flood zone is clearly a destructive environment for archaeological remains (Figure 8).



*Figure 8.* DAEI worked at Gird-i Gulak between 2016 and 2019. The high waters of Lake Dokan from the spring through to early summer and the heavy rain that follows from late autumn through winter makes it almost impossible to work at Gird-i Gulak; nevertheless, there is a small window of opportunity of around 30 days in early autumn between the receding of the lake's water and the onset of heavy rain. Here we can see the difficult fieldwork conditions in 2019. During the first weeks of the season the team and equipment were transported to the site by boat. Photo: Henrik Brahe 2019.

## Neo-Assyrian occupation at Gird-i Gulak: DAEI excavation results from 2016 to 2018

The Neo-Assyrian presence at Gird-i Gulak is impressive. Neo-Assyrian remains and finds have been found in almost every sounding. The excavation results confirm our surface survey, which identified Iron Age remains across the mound and its surroundings. What follows is a brief account of significant Neo-Assyrian deposits.

### Sounding 10

Sounding 10 was excavated in 2016 and is a 2 x 2 m test sounding located on the lower part of the southwestern slope of Gird-i Gulak.<sup>9</sup> Below more than two meters of erosional debris, excavations identified the edge of a substantial mudbrick wall built of regular reddish and greyish bricks with

<sup>9</sup> See COLANTONI et al. 2018, Figure 2 and SKULDBØL – COLANTONI 2018, Figure 3.

thick yellow mortar lines (Figure 9). Associated pottery supports a Neo-Assyrian date for this wall. Taking its location on the western flank of the settlement, combined with evidence from the 2019 season (see below), it is likely to be the edge of a fortification system enclosing the site.



*Figure 9.* Mudbrick wall recovered at the base of Sounding 10. The wall was made of light brown, reddish and grey bricks. A thick yellowish mortar was occasionally used, but no plastered faces were identified. Photo: Henrik Brahe 2016.

## Sounding 11

Sounding 11 is located at a short distance to the southwest of Sounding 10. It was excavated in 2016 to a depth of c. 2 m. To our surprise, this 2 x 2 m test sounding resulted in limited archaeological deposits and potsherds. Testing with geological coring gear at the base of the sounding probed down a further 1.5 m (total depth c. 3.5 m) and returned no traces of archaeological deposits, but rather rock hard, uniform brown waterlogged soils with lime inclusions. Therefore, it is possible that Sounding 11 is located in an artificial moat or ditch dug in antiquity for the purpose of protecting the site.

## Sounding 16

Sounding 16 is located at the northern base of Gulak. It was opened in 2016 and was extended to 4 x 4 m in 2017. Excavations exposed a section of a large mudbrick structure or wall foundation and a later constructed baked brick-lined well (Figure 10). The structure likely belongs to a fortification system that circumvallated and protected the settlement. At the current stage of investigations, it is estimated to be more than 5.5 m wide. The structure was constructed in a similar way to the wall recovered in Sounding 10. Ceramics and finds (e.g. bronze and iron armour scales) recovered from beneath the base of the wall and from within the brick-lined well date to the Neo-Assyrian period.





*Figure 10.* Excavation in Sounding 16 recorded a large mudbrick fortification structure. A later baked brick-lined well cut this wall. Excavation of the well was halted when the water table was reached. Modern damage to the fortification structure by bulldozing (following our excavations in 2016) is visible in the lower right corner (square cut). Photo: Henrik Brahe 2017.

## Sounding 21

Sounding 21, excavated in 2017 and 2018, measures c. 6 x 8 m and is located at the eastern end of Gird-i Gulak's saddle. Several stone-lined graves (belonging to a 19th-20th century AD Islamic cemetery) were found to have cut into a large structure. The structure may have been the foundations of a fortification or terracing wall, or possibly even a gateway, running across the top of the mound (Figure 11). The structure consists of a c. 3 m wide mudbrick wall or possibly tower and an outer red brown packing deposit of natural soil (possibly the remnants of a rammed earth defensive structure). This fortification structure was built into earlier LC occupation levels. Due to complicated stratigraphy, dating the structure is problematic as the limited pottery suggests an LC date. However, similarities in size and construction to sections of fortification walls recovered across the site points towards a Neo-Assyrian date for the structure.



*Figure 11.* Fortification structure uncovered in Sounding 21. Red brown soil packing, up against the sectioned mud brick structure running NW-SE, is visible in the northeastern corner of the trench. Photo: Tim Skuldbøl 2018.

### Sounding 23

In 2017 substantial evidence of Neo-Assyrian occupation was also recovered from Sounding 23 (2 x 8 m) located on the western part of the saddle and in the central portion of the site. Beneath a layer of indistinct Iron Age deposits, part of another large mudbrick structure was exposed. It was originally interpreted as part of a large public building<sup>10</sup>; however, further investigations in 2019 in Sounding 28 and 31 (see below) suggest the structure was probably part of a fortification system or platform that ran across the settlement (Figure 12). Pottery and finds associated with this structure date once more to the Neo-Assyrian period (Figure 13).

<sup>10</sup> See COLANTONI et al. 2018.





Figure 12. Sounding 23 is located in the centre of the site. The photograph shows a segment of a large, probably Neo-Assyrian, fortification structure or platform. Visible in the SE corner is the face of a baked brick drain (see S31). Photo. Henrik Brahe 2017.



Figure 13. A selection of predominantly Neo-Assyrian ceramics from deposits sealing the fortification structure recovered from Sounding 23. Photo. Henrik Brahe 2017.

## Sounding 27

Sounding 27 (4 x 4 m) is located about 7 m to the northwest of Sounding 21. In 2018 excavations in Sounding 27 revealed a section of the fortification wall found in Sounding 21 and associated red brown packing soil (Figure 14). Constructed with the same colour and size mudbricks, these two sections of a possible fortification structure share similarities in alignment, construction and elevation.



Figure 14. Part of a mudbrick and associated red brown packing fortification structure recovered in Sounding 27. Modern pitting and bulldozer activities have destroyed parts of the wall and packing. Photo. Tim Skuldbøl 2018.

## Neo-Assyrian occupation at Gird-i Gulak: DAEI excavation results from 2019

In 2019 our work continued to focus on Neo-Assyrian occupation at the site. This followed the find by a local fisherman earlier in the year of a Neo-Assyrian clay tablet fragment originating from the site. The fragment is a contract for the sale of a field owned by six men and possibly dates to the 8th or 7th century BC. It is the first Neo-Assyrian text found on the Rania plain.<sup>11</sup> The tablet find supports our growing concern that the site is being damaged by high lake water levels in recent years (see above).

<sup>11</sup> For a translation and detailed discussion of the tablet fragment, see MacGinnis – Skuldbøl – Colantoni, forthcoming.

We excavated two large and two small soundings in the central part of the mound, and began to re-excavate and tidy the Iraqi excavation of the late 1950s. Remains of fortification structures dating to the Late Assyrian period were recovered in three of the soundings.

## Sounding 28

Sounding 28 is a 4 x 18 m long trench intended to investigate the relationship between an expansive black, grey and white stone cobble surface (first identified in the southern section of the old Iraqi excavation trench) and the mudbrick structure discovered in Sounding 23 in 2017 (Figure 15).



Figure 15. Sounding 28, a trench connecting the cobble surface and the mudbrick structure excavated in Sounding 23. UAV photo: Henrik Brahe 2019.

A large mudbrick structure or platform was found in the southern end of Sounding 28 (Figure 16). The structure connects with the mudbrick structure excavated in Sounding 23 (see above). The structure was built of light brown, reddish and greyish mudbricks. Mortar was rarely used, making the identification of individual mudbricks difficult due to their similar colour and composition.



*Figure 16.* The massive mudbrick structure found in the southern part of Sounding 28. The variation in levels on the mudbrick platform is due to the difficulty in defining individual mudbricks. In the bottom left-hand corner is a test sounding from 2017. To the north (right) and abutting the mudbrick structure a series of cobbled courtyards were identified. Photo: Henrik Brahe 2019.

Abutting the northern side of this massive mudbrick structure we uncovered three phases of the cobbled courtyard (Figures 17 and 18). The lower and earlier courtyards are evidence of a longer period of Assyrian occupation than initially thought at the site. The latest courtyard was constructed with alternating black, grey and white cobbles. It covers most of the northern part of Sounding 28 and extends more than 10 meters to the west and is, as mentioned above, visible in the section of the old Iraqi trench. It is very likely that in the 1950s the Iraqi team exposed and removed a large section of the courtyard. A similar courtyard with alternating coloured stones has recently been uncovered at Gird-i Tilleh/Gird-i Tle (*see paper on Gird-i Tilleh in this volume*).



Figure 17. The well-constructed cobbled courtyard found in Sounding 28. Photos: Henrik Brahe 2019.



*Figure 18.* Central part of Sounding 28 showing the excavation of two lower phases of the courtyard from the Neo-Assyrian period. A large, deep and recent robber pit cuts into the fortification wall and the lower courtyards in the central part of the sounding. Photo: Henrik Brahe 2019.

From the nature of the settlement in this period and the expanse of the features, we speculate that the stone pavements represent an extensive courtyard in front of a gateway leading to the top of the settlement. Pottery and finds associated with the wall and courtyards date to the Neo-Assyrian period.

## Sounding 29

Sounding 29 (4 x 10 m) is located on the southern edge of the saddle of Gird-i Gulak, where erosion by Lake Dokan has exposed extensive mudbrick remains and baked brick features. Recent bulldozing of the area to flatten the mound for mechanised farming has resulted in severe damage to archaeological deposits.

DAEI's salvage investigations recovered an extensive mudbrick structure or a segment of a platform similar to those structures found in Soundings 23, 28 and 31. In addition, two baked brick drains were traced. These are likely to have been connected to an extensive drainage system that served the rooms and exterior surfaces of the settlement; remains of which are visible along the flanks of the saddle and in a number of soundings (Figure 19). Pottery and small finds found in association with the wall and drains date to the Neo-Assyrian period. Recovered together with the northern drain was an incomplete small Neo-Assyrian 'Palace Ware' style jar.



Figure 19. Sounding 29. Showing the remains of the mudbrick platform and two baked brick drains from the Neo-Assyrian period. Later erosion and modern activities, such as bulldozing, resulted in the probable removal of the archaeological deposits from immediately above the brickwork. Photo: Tim Skuldbøl 2019.

## Sounding 31

Sounding 31 is a 4 x 5 m trench located southeast of Sounding 28, abutting the southern end of Sounding 23. It was placed to investigate the mudbrick structures recovered in Sounding 23. As we think was the case for Sounding 23, mudbricks covered the entire trench - suggesting that the mudbrick 'building' found in Sounding 23, 28, 29 and 31 is likely to be some form of platform or foundations. A baked brick drain was excavated in the central part of Sounding 31 (Figure 20). It was constructed in a similar fashion to the drains found in Sounding 29. Pottery recovered in association with the mudbrick structure and the drain again dates to the Neo-Assyrian period.



Figure 20. Sounding 31. The uncovered mudbrick structure or platform and baked brick drain. The drain was built and capped by baked bricks and supported with cobbles. The cobbles, although most likely part of the drain feature, could also be the remains of a no longer preserved courtyard. Photo: Henrik Brahe 2019.

### Recorded surface remains from Gird-i Gulak

In the summer of 2019 Lake Dokan reached its highest extent, resulting in extensive erosional damage to the site. In the following 2019 autumn season, we inspected and recorded this recent damage. The southern side of Gird-i Gulak has particularly suffered from erosion by the lake's waters over the years and in 2019 numerous archaeological features such as baked brick drains, extensive floors and surfaces, pits and pots were exposed.

On the eastern slopes of the mound cist graves belonging to a recent cemetery were exposed and the contents washed away or robbed (Figure 21).





*Figure 21.* UAV/aerial drone image of the eastern side of Gird-i Gulak showing the exposed cist graves. Similar cist graves were uncovered in several soundings. Photo: Henrik Brahe 2019.

Nevertheless, the erosion by the lake did provide some benefits. Wide mudbrick fortification walls and towers could be identified at intervals along the entire perimeter of the mound (Figure 22). These structures, when taken in the wider context of associated architecture and deposits, most likely belong to the Neo-Assyrian phase of occupation at the site. The features are visible on both the higher and lower slopes of the mound indicating that a pair of walls may have surrounded the mound; though it is also possible that the walls represent different phases of occupation.



*Figure 22.* Upper: Drone image of the northern side of Gird-i Gulak showing the large exposure of mud-brick structures. Although speculative, it might represent the corner of the gateway to the settlement. Lower: Drone image of the southern side of Gird-i Gulak showing the exposed fortification wall and a tower. Photos: Henrik Brahe 2019.

## Ceramics and finds from Gird-i Gulak

Ceramics collected from the excavations at Gird-i Gulak are still being studied and the following observations are therefore preliminary. Our investigations suggest the Iron Age ceramic assemblage

from the site is distinct. On first inspection, it seems to represent a typically Neo-Assyrian ceramic assemblage known from sites in the heartland of the Neo-Assyrian Empire. However, as further Iron Age sites are investigated in the Zagros foothills and evidence for local Iron Age ceramic traditions grow, a heterogeneous ceramic tradition is becoming evident. The Iron Age assemblage from Gird-i Gulak displays similarities with ceramic traditions in both northern Mesopotamia and western Iran. It is too early to establish with confidence if the ceramic repertoire from Gird-i Gulak retained a local character, as has been noted at other sites in the region.<sup>12</sup>

The ceramic assemblage from Gird-i Gulak includes classic Neo-Assyrian ceramic shapes, such as carinated bowls, folded and hammerhead-like rims, bowls with ring bases, necked jars with everted or triangular rims, as well as so-called Palace Ware.<sup>13</sup> Evidence for a local Iron Age ceramic tradition are S-shaped (carinated) bowls (Fig. 23, no. 9). These show similarities with the local ceramic tradition found on the Peshdar Plain.<sup>14</sup> A significant number of potsherds are also burnished. The burnishing of ceramics find parallels elsewhere on the Peshdar and Rania Plains, as well as in western Iran.<sup>15</sup> Further studies will aim at clarifying the heterogeneous composition of the assemblage from Gird-i Gulak.

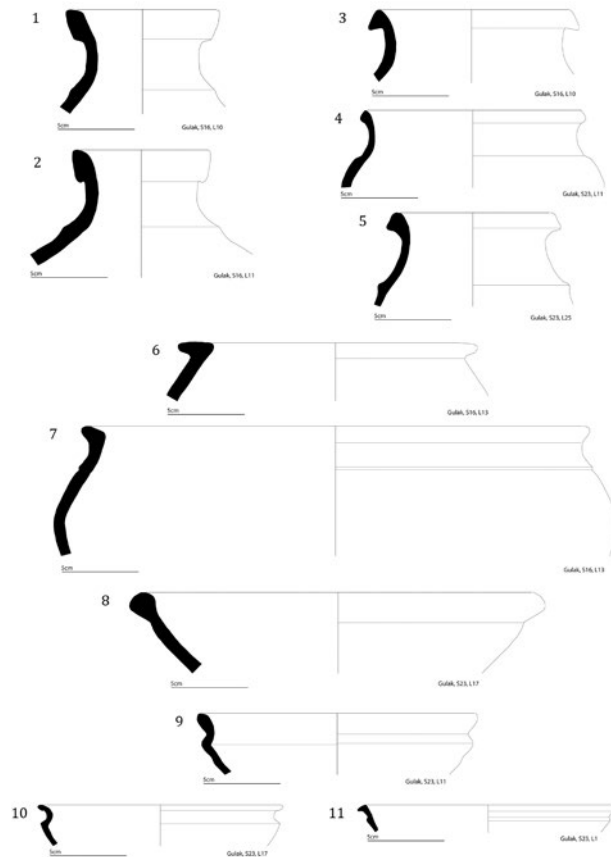


Figure 23. Neo-Assyrian ceramics from Soundings 16 and 23.

<sup>12</sup> RADNER et al 2016, 99.

<sup>13</sup> Eg. OATES 1954; OATES 1959; CURTIS 1989; FÜGERT et al. 2014; KREPPNER 2006.

<sup>14</sup> Eg. RADNER et al. 2018, Fig. F1.8.

<sup>15</sup> RADNER et al. 2016, 85; TSUNEKI et al. 2016.

No.	Context	Surface colour	Inclusions	Comments
1	S16 L10	Greenish buff	Few fine chaff and grit.	
2	S16 L11	Greenish buff	Few fine chaff and grit	
3	S16 L10	Buff	Few fine chaff and many fine grits	
4	S23 L11	Light brown	Chaff and grit	
5	S23 L25	Light buff brown	Few fine chaff, many fine grit	
6	S16 L13	Brown	Abundant grit	
7	S16 L13	Light brown	Chaff and grit	Burnished
8	S23 L17	Orange brown	Chaff and grit	Burnished
9	S23 L11	Brown ext., grey int.	Medium fine chaff	Burnished
10	S23 L17	Greenish buff	None	Fineware, burnished.
11	S23 L1	Greenish buff	None	Fineware

Table 1. Description of ceramics presented in Figure 23.

## Discussion and conclusions

The takeover of the Zagros foothills by the Neo-Assyrian empire had a considerable impact on the region.<sup>16</sup> Although it is uncertain precisely when the region was integrated into the empire and later lost, it is likely there was a continuous Assyrian presence in the region for almost 300 years possibly starting with either Adad-Nirari II (911-891 BC) or at the latest by Ashurnasirpal II (883-859 BC).<sup>17</sup> The Assyrian impact is reflected in the archaeological record from the foothills and further east. Of significance are growth in settlement numbers, infrastructure investment providing goods and water to the imperial core, and the strategic management of the border region with the building and reconstruction of strongholds and administrative centres.

Combined excavation and survey results from the Peshdar and Rania plains are beginning to reveal a similar complex development for the period, even though the plains may not have been simultaneously under Neo-Assyrian control. Notable is a peak in settlement numbers. A number of combined factors may have been responsible for this peak and could explain this settlement development, including a considerable investment in the administrative and military control of the plains together with other measures such as possibly enforced settlement.

Of note is the building of forts and strongholds on the Peshdar and Rania plains marking the military consolidation of the region. The forts and strongholds were placed at strategic locations: at major axes of communication or at entryways to the plains. The construction of the fort of Usu Aska, strategically located at the Darband-i Rania corridor (currently investigated by the British Museum<sup>18</sup>; the fortress of Qalat-i Dinka on the Peshdar plain (currently being investigated by the German Peshdar Plain Project)<sup>19</sup>; the large stronghold of Gird-i Tilleh/Gird-i Tle (investigated by a Eötvös Lorand University team)<sup>20</sup>; together with the site Gird-i Gulak, are important cases of Neo-Assyrian investment for controlling and safeguarding the region.<sup>21</sup>

<sup>16</sup> See RADNER et al. 2020 for a discussion of the Neo-Assyrian expansion into foothills and western Iran to the south of the Rania Plain.

<sup>17</sup> See MACGINNIS – SKULDBØL – COLANTONI forthcoming.

<sup>18</sup> See MACGINNIS et al. 2020.

<sup>19</sup> See RADNER et al. 2016.

<sup>20</sup> See DEZSÓ et al. 2017.

<sup>21</sup> Other possible Neo-Assyrian settlements or strongholds are: QALADZE (see D'AGOSTINO et al. 2016); DUGIRKAN (see EIDEM 2020); Qalat Said AHMADA (see TSUNEKI et al. 2016); see AL-SOOF 1970 and EIDEM 2020 for further potential important Neo-Assyrian sites on the Rania Plain.

In the case of Gird-i Gulak, the fortress was a substantial and well-planned construction. Evidence recovered from surface collections and excavation suggests that during the Iron Age Gird-i Gulak was protected by a double fortification system. DAEI has been able to plot a lower wall running along the base of the site and an upper wall that may have been integrated into a large terracing platform covering the central part of the site's saddle. Both the upper and lower defensive structures appear to have mudbrick towers (Figure 23).

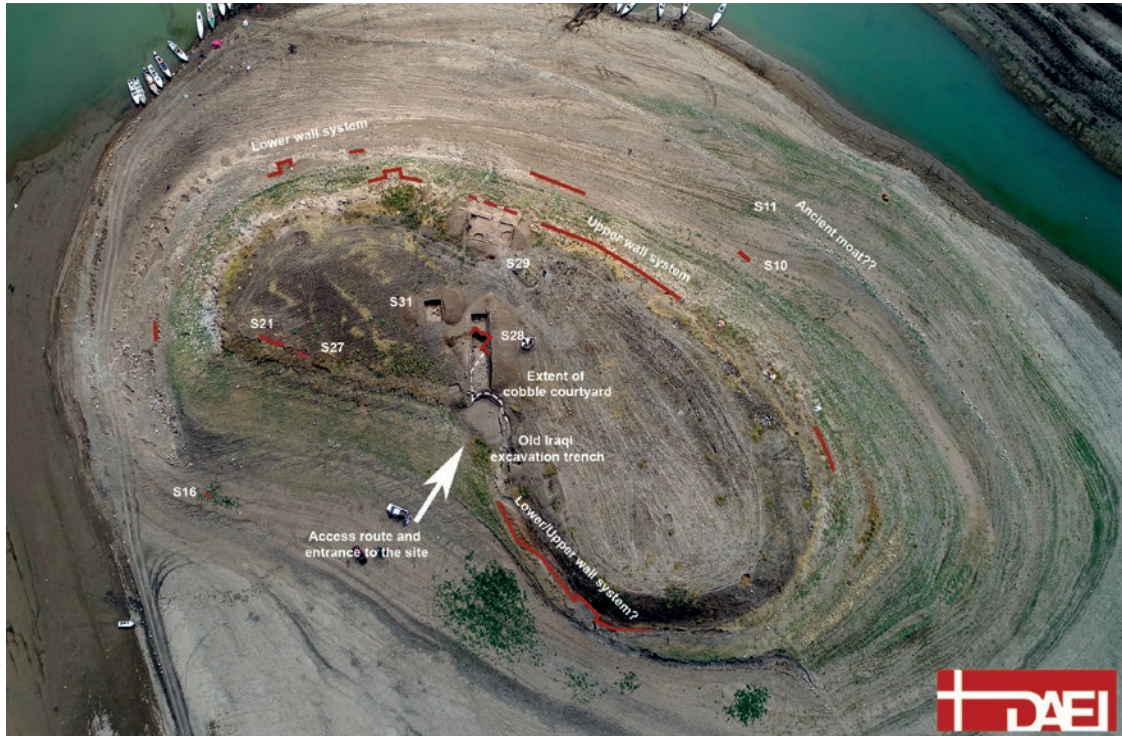


Figure 24. Location of mudbrick walls (red) observed on the surface of the mound and in the excavation of soundings. Evidence suggests that Gird-i Gulak was protected by a double fortification system and perhaps also a moat. A large and centrally located cobbled courtyard may indicate the entrance to the site. Illustration compiled by Tim Skuldbøl.

The lower wall system has been identified in several locations on the surface at the base of the mound, as well as in two soundings (S10 and S16). At least one, possibly two, towers have been located on the surface and in excavations. Evidence from S16 suggests the lower mudbrick wall was more than 5.5 m wide.

The upper wall system or platform was identified on the edge of the saddle and in five soundings (S21, S23, S28, S29, S31). The structures recovered in S21 and S28 may represent parts of towers or bastions. However, work in S23, S29 and S31 produced evidence of a major terracing platform on the saddle as contiguous mudbricks seem to run across all those soundings. Evidence for walls and associated deposits above the platform are inconclusive. Whether the latest phase of occupation and remodelling was never completed or that the walls and deposits were destroyed later or have eroded away requires further investigation. Therefore, the baked brick drains uncovered in S23, S29 and S31 are, at this moment, the only firm indications for the use and spatial organisation on top of the platform.

From the associated ceramics and finds it seems evident that both wall systems date to the Neo-Assyrian period, although it is not yet clear whether they were contemporary. The identifica-

tion of several phases of cobbled courtyards, of which the lowest two were partly built over by an extension of the large platform, suggest that some major remodelling and recurrent investment was undertaken at the settlement during the Neo-Assyrian period. The baked brick well excavated in Sounding 16, which cuts an earlier fortification wall, further points to a longer Neo-Assyrian presence at Gird-i Gulak.

Parallels for the mudbrick fortification walls with their incorporated towers seen at Gird-i Gulak can be found in the central and western parts of the Neo-Assyrian empire; for instance, at the site of Tell Sheikh Hamad (the ancient city of Dur-Katlimmu located on the Lower Khabur river in eastern Syria), where a large mudbrick defensive work was found in the Lower Town.<sup>22</sup> Likewise, baked brick drains similar to those found at Gird-i Gulak and dating to the late Neo-Assyrian period have also been excavated in the Lower Town of Tell Sheikh Hamad. These baked brick features provided drainage for the bathrooms and courtyards of an elite residence, the so-called “Red House”.<sup>23</sup>

In light of this, the architectural and artefactual evidence from Gird-i Gulak - the assemblage of classical/typical Neo-Assyrian ceramic forms and high-status objects<sup>24</sup>, and the fragment of an inscribed clay tablet<sup>25</sup> - presents a strong case for the site being a small fortified administrative centre dating to the Neo-Assyrian period. Although we do not yet understand the relationship between Gird-i Gulak and other centres and strongholds on the Peshdar and Rania plains from this period, Gird-i Gulak’s strategic location, the large investment in the site’s fortification systems and its possibly long occupation makes it plausible that Gird-i Gulak played an important role as a node in the Assyrian control of this transitional border zone. Additionally, we do not as yet understand the significance of local and western Iranian ceramic traditions in the collected assemblages from Gulak. It may signify strong cultural interactions across the Zagros Mountains, as identified by DAEI for the LC period. This synthesis of traditions may also point to the continued settlement of local populations despite the political transformation of the region.

By employing an extensive test strategy incorporating surface survey, test soundings and corings DAEI has started to build a picture of LC and Neo-Assyrian occupation at Gird-i Gulak. However, in order to fully understand and reconstruct the site’s biography, as well as its geological and human topography, further investigations are needed. As the site is being severely damaged by Lake Dokan and modern human activities, continued salvage investigations at the site are imperative. Following our investigations of the saddles of the mound, Gird-i Gulak’s high mound appears to be an obvious place to concentrate efforts to recover preserved in situ deposits from the Neo-Assyrian period. In 2017 we excavated a 2 x 2 m sounding (S24) on Gulak’s high mound. Below around 2 m of modern deposits and late Islamic cist graves we identified what seem to be well-preserved Neo-Assyrian layers. If our assessment of the nature of the site is correct, there is likely to be a Neo-Assyrian administrative complex that may contain textual records that would shed light on the mechanisms of control on the plain. We believe the high mound of Gird-i Gulak may hold the main administrative complex of the site. It is also likely the archaeological deposits on the high mound are in a better state of preservation as this portion of the site remain above Lake Dokan’s high water mark and later deposits likely protect the Neo-Assyrian remains from erosion and modern activities. It is expected that future excavations at Gird-i Gulak will inform us about this particular area of the settlement in more detail, likely providing further insights on the nature and extent of Neo-Assyrian control of the region. This will allow us to contribute to a better understanding of the means in which empires took control of their border regions.

<sup>22</sup> KÜHNE 1994.

<sup>23</sup> See KREPPNER 2019; KREPPNER 2016; KREPPNER – SCHMID 2013

<sup>24</sup> MAKINSON et al. this volume.

<sup>25</sup> MACGINNIS – SKULDBØL – COLANTONI forthcoming.

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Figure 25. The 2019 DAEI team proudly displaying their brand-new project t-shirts, with a logo designed by one of the project directors. Photo: Henrik Brahe 2019.

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