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Decorated and 'killed'? The bronze sword of Werkhoven

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In 2011, a bronze sword was found in Werkhoven (the Netherlands) that is remarkable for its uncommon decoration and bent shape. In this contribution we argue that we are dealing here with a Griffplattenschwert that was only partly finished and probably never used. It can be dated to the later part of the Dutch Middle Bronze Age or the early Late Bronze Age. It carries a very uncommon type of decoration consisting of small dots, hatches and large dots. The sword was heavily damaged and bent into an L-shape before it ended up in the ground, and we argue that we are dealing with a sword that was ritually 'killed' by its Bronze Age owners. Investigation of the find spot indicates that it was probably deliberately deposited in a gully afterwards.

1 The discovery history

Whilst out scouring fields with his metal detector in May 2011, Robert van Eerde made an extraordinary find on a field by the *Hollendewagenweg* in *Werkhoven* (Municipality Bunnik, province of Utrecht, the Netherlands). Even though he had his metal detector in his hand, he did not use it to make his discovery. He noticed a metal point sticking out of the clay. When he pulled the piece from the ground it turned out to be a long, bent piece of metal. He initially considered tossing it aside, but decided to take it with him because it was such an odd object. At home he cleaned the metal with water and olive oil, and carefully examined it. There were rows of dots visible on the surface, and the metal appeared old to him. He placed several pictures on an internet forum for metal detectorists. The enthusiastic responses made him realize that he was indeed dealing with a prehistoric object. It turned out he had found a bronze sword.

He subsequently reported the sword to the municipal archaeological service of his hometown of Amersfoort. The sword remained there for an initial phase of documentation and further determination. Employees of the local archaeological service brought the sword to the Cultural Heritage Agency of the Netherlands (RCE), whereupon the first author examined it at the Faculty of Archaeology in Leiden.

In June the sword was examined with XRF twice, and in November the find location was recorded. This involvement of the RCE was the result of a heritage value assessment that had taken place in 2006, also at the *Hollendewagenweg* (Theunissen *et al*. 2008). Two Late Bronze Age socketed axes had been discovered in 2004 and 2005, about 850 m to the south at roughly the same location, some 30 cm below the top soil. The finding of a bronze sword in the same area, with a comparable patina and age, was reason to collectively study the environmental context and meaning. The question we asked ourselves was whether we are dealing here with bronzes from one large hoard or even a Bronze Age metalwork deposition zone (cf. Fontijn 2002, 259-272)? In this contribution we will first describe and date the sword and try to see what people did with swords in the past. Then, we will try to understand how the sword ended up in the ground.

2 Description of the sword

In unbent form the sword is roughly 36.2 cm long (fig. 1). The width is between 2.6 and 2.7 cm, and the blade is between 0.4 and 0.5 cm thick. The sword weighs 337 g. It is now part of the collection of the National Museum of Antiquities (RMO), inv. no. f 2012/4.1.

Shape

The sword can be classified as a short *Griffplattenschwert*, following Schauer's definition (1971, 3). The blade has a plate-shaped, square end which is as wide as the blade. This butt-end was to be inserted in, or attached to an organic handle. This was often done with rivets (holes in the butt-end) or with side-notches. Both are missing here. Assuming that the decoration was visible, *c*. 4 cm of the bronze would have been in the handle. The blade has the "flattened diamond-shape" cross-section typical for all swords. There are slightly flattened parts less than 1 cm to each side of the cutting edge. The width of this flatter part (the onset of the edge to be sharpened) varies over its length and is not symmetrical in relation to the central rib.

Decoration

The upper part of the sword is decorated with small impressed dots on one side (fig. 1: left), and with small impressed dots, small hatches and large dots on the other, more decorated, side (fig. 1: right). Comparing both sides, the less decorated side has the same basal pattern as the other side but lacks the additional decorative elements. The basal pattern to be found

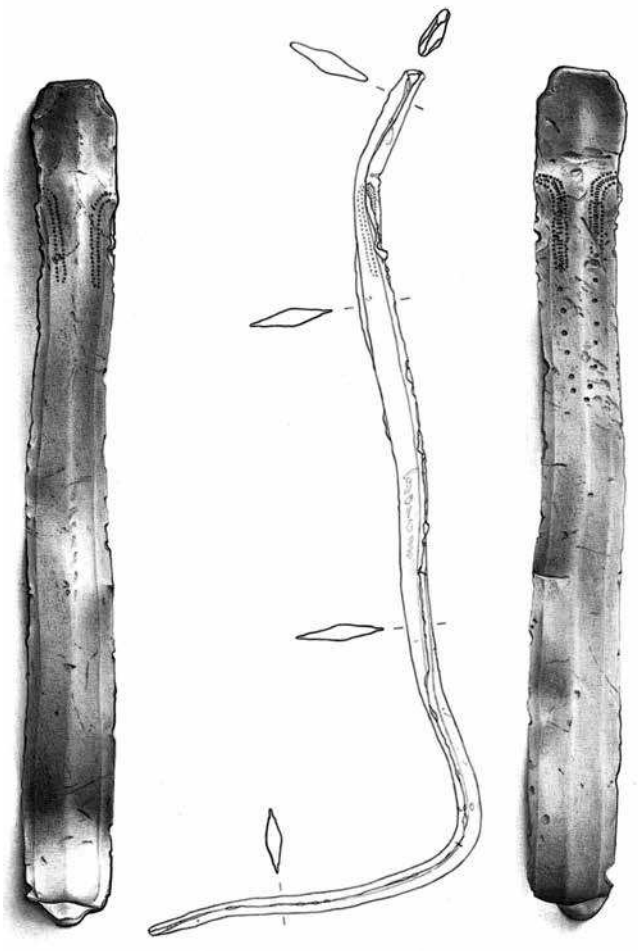

Figure 1 The sword from Werkhoven. When unbent it has a length of 36.2 cm. (Drawing by R. Timmermans. Copyright Faculty of Archaeology, University of Leiden).

on both sides is a double row of dots on either side of the central rib. The double row of dots runs parallel to the cutting edge, at a little less than 1 cm from it, and then angles off to end on the cutting edge (where the butt-end would have been attached to or been inserted into the hilt).

Let us start with the description of the most decorated side (fig. 2). At this side, we can see little hatches (length 0.1 cm) between the dots that nearly connect the pairs of dots (fig. 2). The hatches end about 1 mm before the dots. On one side the hatches end when the double row of dots angle off to the edge, on the other side the hatches bend with the rows of dots (fig. 1: right). On the more extensively decorated side there is also a decoration of larger impressed dots. In some places these run right through the decoration of smaller dots and hatches, as can be seen in figure 2. This is an indication that they were the last decorative addition. The larger dots are somewhat irregularly placed, but also on both sides of the central rib (at *c*. 7-8 mm from the cutting edge). They run roughly parallel to the cutting edge for about 6 cm and then come together in a single dot. Just like the small dots and hatches, the larger ones are not neatly symmetrical. In one of the larger dots there is a small reddish concretion that probably deposited there after the sword came to lie in the ground. In two of the larger dots there is a whitish material that looks very different (fig. 3). Is this material a filling? We will come back to this below.

The other side of the sword is much less richly decorated (fig. 1: left). There is a comparable decoration pattern with double rows of small dots on either side of the central rib, but without the hatches or larger dots. It is striking that on the less decorated side only one of the double rows of dots angles off to the edge. If the intention was to decorate this side in the same manner as the other side, then the decoration was not finished on the less decorated side.

Figure 2 The butt-end of the sword showing the most decorated side. Note the damage at the transition from blade to hilt, and the rectangular notch at the edge. (Photograph by National Museum of Antiquities Leiden (RMO)).

Figure 3 White filling of the larger dots. (Photograph by National Museum of Antiquities Leiden (RMO)).

Manufacturing traces
The butt-end of the sword has various dents on the sides. The casting is rather uneven here. This shows that the sword was not finished further after casting and removal (the breaking off) of the casting plug. On the cutting edge there are several notches that could have formed during casting (air bubbles, sub-optimal flow of bronze). A substantial dent in the cutting edge (length 2 cm, depth *c*. 2-3 mm), a little over 7 cm from the tip was likely also formed during casting. There are similar traces by the butt-end. It is clear that no attempts were made to smooth out the casting traces. Round and oval cavities on the blade were formed by air bubbles. From butt-end to point there are also small and large, crisscross running, oblong cavities. In one spot we see that a 'large' dot was punched in over such a cavity, indicating that these cavities were present as bulges or air bubbles in the original cast. Some are erratic and must have driven the bronze up when it was still liquid. This must have occurred directly after casting, for example by the wiping away of dirt or irregularities on the cast before it had completely cooled. In sword casting experiments, whereby the swords were cast in a clay mould by the experienced bronze smith Jeroen Zuiderwijk of *Archeon*, material from the mould often became attached to the cast. These experiments also revealed that it is well possible to apply delicate decoration such as these small dots and hatches with a metal awl. The fact that the larger dots run through the smaller dots/hatches decoration shows that this type of decoration was probably applied later (fig. 2).

Use-wear
The butt-end does not have holes for rivets nor does it have side-notches. These are sometimes missing with this shape and this does not necessarily mean that the sword was never prepared for use. There are grinding traces visible on one side of the butt-end. The cutting edge is not sharp and the point is blunt. Traces of (prehistoric) sharpening are not convincingly visible. The cutting edge has been somewhat ground, but the absence of patina suggests this was done recently. There are a lot of small dents on the cutting edge. Many of these will have been created during casting. Some may be the later result of a blow. The rectangular notch (2 by 2 mm) right below the butt-end has an unnatural shape for a casting error and is likely man-made (by applying upright pressure – this makes it less likely that this is battle damage; figure 2).

Predepositional damages
The most noticeable damage is the bending, which resulted in the sword's current L-shape. According to the finder, the sword had this shape when discovered. The sword must have been bent with (great) force. The tip side was likely clamped at the bending point whereafter the other end was pushed. In the same manner the butt-end could have been slightly bent. On the spot that must have served as hinge, there are two horizontally running damages that likely occurred through friction (bending, possibly with a hard blow to the end). The patination of the surface indicates that this is old damage.

That the damage occurred after casting (and the first finishing) can be deduced from the fact that vertically running traces are interrupted by the damage. The rectangular notch by the butt-end mentioned earlier is another example of damage that occurred prior to the object ending up in the ground (fig. 2) and so is a long horizontal damage to the middle of the blade, ending in a tear on the cutting edge (fig. 4). A blow (with a metal object) likely landed here, which resulted in a misshaping of the blade (it is also somewhat dented there). Bent swords are known from other parts of Europe, and often these have been bent in a much more extreme manner than the sword we are discussing here. The sword from the Late Tumulus/Early Urnfield Period Penkhof hoard in the Upper Palatinate is a case in point. The sword blade is almost doubled-up (Stein 1979, pl. 97-107; Nebelsick 2000, Fig. 11.6). If one wants to fold a bronze sword like that, it is necessary to heat it. Otherwise it will break (personal communication M. Siedlaczek, Berlin). It is likely that the L-shaped form of the Werkhoven sword also involved heating of the blade. Metallurgical research will be carried out in the near future to shed more light on this. At any rate: it is clear that the Werkhoven sword has been damaged intentionally in prehistory.

Post-depositional damages
On the central rib is a series of diagonal damages, underneath which a dark copper colour is visible. Considering that this colour is not visible in the cavities of other notches and damages, this is likely more recent damage and may have been the result of a plough hitting the sword in recent times. The sword is covered with a black-dark greenish sheen, through which a golden colour shines through. On one side the original bronze colour is much better visible than on the other. How these differences came about remains unclear. According to the finder, they cannot be the result of modern cleaning.

The metal – results of the XRF-measurements
The composition of the sword was determined with a portable X-rayfluorescence-spectrometer, known as XRF. Several measurements were taken first on the lighter side of the sword. This yielded almost exactly the same results for all locations, which indicates the composition is very homogeneous (table 1). The bronze is roughly made up of 87% copper, 10-11% tin, and little lead 0.7-1%, zinc and antimony. These proportions indicate a cast material that is close to the

Figure 4 Large damage at the centre of the blade. (Photograph by National Museum of Antiquities Leiden (RMO)).

	Sample	1392	1467
		sword - general	gray inlay
	Unit		
Cu	%	87	-
Sn	%	12	-
Pb	%	0.81	-
Zn	%	0.08	-
Bi	%	0.02	-
Sb	%	0.22	-
Au	%	<0.0	-
Ag	%	0.09	-
Si	%	-	12.66
Ca	%	-	6.70
S	%	-	1.88
Fe	%	0.40	0.96
K	%	-	0.63
Cl	%	-	0.51
P	%	-	0.19
Mn	%	<0.0	0.04
As	%		0.03
Zr	mg/kg	<80.0	<1.9
Rb	mg/kg	-	<0.5
Se	mg/kg	<0.0	<0.2
Mo	mg/kg	<0.0	<0.1
V	mg/kg	153.37	<0.0
Cr	mg/kg	64.11	<0.0
Al	mg/kg	<0.0	<0.0
Ba	mg/kg	<0.0	<0.0
Ni	mg/kg	327.03	823.93

Table 1 Results of XRF measurements. 1392 and 1467 refer to the numbers of the measurements. (By B. van Os, RCE).

original raw material. The bronze was apparently not recycled. A measurement taken on a slightly "darker" (redder) spot gave a value of 1.5% sulphur on the surface. This is an indication of micro formation of the metal sulphide during the stay in the soil.

Secondly, a series of detailed measurements were taken in the small depressions of *c*. 2 mm wide that are visible in a row on one side. A number of these seem to be filled with a specific substance. By setting the XRF on a special micro setting ("mining mode", 8 and 3 mm), it was possible to

measure the fill material. This gave a high silicon/calcium content; a value five times as high as the non-filled bronze. This is a very peculiar result as such high Si/Ca values are particularly known from glass. Are we dealing here with a rare example of a glass inlay? More detailed analysis of the filling is necessary before we can say more about this.

Comparison with other swords

The Werkhoven sword is a short sword (using Schauer's (1971, 1) definition of a sword). The unfinished butt-end is hard to classify typologically (cf. Burgess and Gerloff 1981). Its rectangular shape comes close to that of type Rosnoën or type Vernaisson swords (Reim 1974, 6-7; Butler 1987) but it lacks side notches and/or rivet holes. The former type is known in the Low Countries (Butler 1987, 19-23; Fontijn 2002, App. 5.1). The pattern of small dots angling off to the edge below the butt-end finds a parallel in the way *lines* decorated the upper part of Rixheim-type swords. There are a few examples of such swords in the Low Countries, and on one, the sword from the Meuse in Stevensweert (NL), we see asymmetrically incised lines angling off to the edge (Desittere 1961, Fig. 3). Other examples are much further away: from Bilfingen and Mülheim (Schauer 1971, 61 (no. 182, Taf. 24) and 63 (no. 200, Taf. 27)). It is also found on swords with a slightly deviant butt-end (for example the one from Ossenheim, Schauer 1971, 77 (no. 248, Taf. 35)). However, all these swords have two or three rivet holes and there is a decoration with *lines*. We could not find examples on such *Griffplattenschwerter* where the decoration is carried out with small dots as was done here. A comparable decoration pattern just before the blade-hilt transition and carried out with small dots is known from a number of *Griffzungenschwerter* of type Locras (Schauer 1971, 180-1: nos 532, 535, 536, Taf. 80-1; Wüstemann 2004, 63, no. 216, Taf. 32), and on an example of a *westeuropäischen Griffzungenschwert* (Schauer 1971, 187, no. 560, Taf. 87). It is also visible on Hemigkofen-type swords from the river Thames in England (Colquhoun and Burgess 1988, 27, nos 71 and 73, pl. 12) but all these examples are *Griffzungenschwerter,* which have a very different hilt shape. The obvious conclusion is that decoration with small dots is clearly very rare, both in the Low Countries, Britain and in Central Europe. For the combination of small dots with hatches and large dots, the first author could not find any parallel at all.

In general, we can conclude that the shape is reminiscent of swords and rapiers that occur in the Dutch Middle Bronze Age-B and the early Late Bronze Age (reminiscent of but not the same as Rixheim and Rosnoën-type *Griffplattenschwerter).* This suggests that our sword dates in the French Bronze final I/IIa, *c*. 13th-11th century BC (Fontijn 2002, Fig. 1.4). The few examples of *Griffzungenschwerter* mentioned above with a comparable dot decoration are not much younger than that. The combination of small dots, hatches and larger dots, however, makes the Werkhoven sword very uncommon in both the region where it was found, the Low Countries, and in Northwest and Central Europe as a whole.

Discussion: decorated and killed?

Summing up, we are dealing with a sword that in its broad outline fits within what was usual, but which was never finished, not sharpened, decorated in a very special way and treated abnormally after that: it was battered in many places and bent into an L-shape. How are we to make sense of that?

Let us start with the decoration. It is not symmetrical and the dot patterns that we find on each side look similar, but are different. It almost seems to be an experimental combination in which different decorative elements were tried out (one may think here of the large dots that run over the earlier applied decoration). The less decorated side could well be an unfinished version of the pattern we see on the other side. And even the basal pattern does not seem to have been finished there (the left row does not angle off to the edge; figure 1: left). Together with the somewhat crude casting and unfinished state, one might be inclined to think that we are dealing here with the work of an apprentice. On the other hand, this may be too much a modern view on craftsmanship. Quite some time and energy was spent decorating the sword in a way that – at least in the Low Countries – lacks parallels. If this indeed were a practice sword, the apprentice would be allowed individual artistic freedom to create his or her own designs. Although this cannot be ruled out, it perhaps too much reflects the modern notion of the smith/artist as an independent individual creator. There are indications that this sword was more than 'just' some meaningless apprentice practice. One indication for that can be found in the way people treated the sword after it was decorated. Locally it appears that a start was made at finishing, but this was not completed for the whole sword. What did happen is that the sword received a number of heavy blows in prehistory and at least one notch, the rectangular one, cannot be directly correlated to the use of a sword for fighting. Compared with other Dutch swords investigated by the first author, the one from Werkhoven ranks among the most battered and damaged ones (cf. Fontijn 2002). Besides the sides being battered, the sword was purposefully bent into an L-shape with great force (by clamping the bottom part). This probably involved heating. Bending also occurred at the butt-end. A heavy blow was also delivered to the middle of the sword. After misshaping it was still usable as a hook. One explanation is that it was the intention to chop the sword into pieces (fragments of swords are sometimes found in settlement context: for example the hilt of a Rosnoën-sword that was found in the

fill of a posthole in Elst (prov. Gelderland; Fontijn 2006)). If that were the case, however, people could have done a more effective job by focusing their blows on one spot. It also raises the question why their work was never finished. What we see on this sword reflects rather arbitrarily used violence: an attempt to make an object, which in reality probably never had been used, unusable. Like in the case of the decoration, this is something that is rarely seen on Bronze Age swords found in the Low Countries. A notable exception is the Late Bronze Age hoard of Pulle in Belgium (Van Impe 1973; Fontijn 2002, 169-70). In a marshy stream valley, eight spearheads, fragments of five different swords and one socketed axe were found, all of which were bent and damaged, showing the impact of fire. Most swords that have come down to us are complete and do not have serious damage (Fontijn 2002, 212). The battering and bending of the sword is known from other parts of Europe though. These are usually interpreted as scrap hoards. However, in an interesting article, Nebelsick (2000) has argued that many such scrap hoards actually evidence substantial transformation and sometimes even deliberate violence. There are many instances of objects that have received blows and/or were made unusual. Both in the catalogues of Schauer (1971) on the south German, Austrian and Swiss finds, as well as in those by Colquhoun and Burgess (1988) on those from Britain we find many examples of swords that were deliberately bent. An extreme example is the doubled-up sword from the Penkhof hoard mentioned before. According to Nebelsick (2000), the transformation and damaging of the artefact should be interpreted as motivated by religious rather than practical ideas. Swords were, so to say, ritually 'killed'. Although rare in the Bronze Age, systematic and deliberate transformation of objects like swords is a regular feature of subsequent Early Iron Age "princely" Hallstatt C graves from the Low Countries (*cf.* Van der Vaart 2011; Fontijn and Van der Vaart forthcoming).

In conclusion: we cannot simply explain the decoration as some apprentice exercise, and the remarkable treatment of the sword need not necessarily be explained as some failed attempt to create scrap metal for re-melting. The damage done to the object may also be interpreted as a deliberate attempt to 'ritually' terminate its life-path. One site in the Low Countries that comes to mind is the hoard from Pulle. As set out before, here we are dealing with an entire set of objects, all of which show traces of transformation by fire and human force. However, as already observed by Van Impe (1973), this seems to have been the prelude to a final act in which all objects were left in a marshy stream valley. At this moment, almost 40 years after Van Impe's publication, we can conclude that deposition of metalwork in watery places was a regular practice (Fontijn 2002; Verlaeckt 1996; Warmenbol 1992). With the idea of a deliberately 'killed' sword in mind, we must return to one last essential question. How did the remarkable Werkhoven sword end up in the ground?

3 Investigating the find location

Werkhoven is situated in the Dutch river area, a region that is known for its rich archaeological heritage of Bronze Age settlements (Arnoldussen 2008). The fluvial landscape that was created by the rivers Meuse, Rhine, and Waal was a dynamic and attractive environment in prehistory. The high, dry and sandy locations such as the river dunes (Dutch: *donken*), but especially the levees of the channel belts and the crevasse splay deposits were often chosen for habitation during the Middle Bronze Age. Nowadays, it is regarded as a typical Dutch flat environment with elevations only spotted by a discerning eye. The find spot is situated in the *Kromme Rijngebied*, on the *Werkhovense* channel belt (Berendsen and Stouthamer 2001). The Werkhovense system silted up around 2000 BC, and became attractive for habitation.

More precisely, the sword was found on the northeastern part of an extensive plot at the Hollendewagenweg (coordinates 145.339/446.671). The arable land plot is *c*. 900 m long, 150 m wide, with a southwest-northeast orientation. At the time of discovery the top soil had just been ploughed and levelled in preparation of sowing grass seed. The tenant of the plot had some time previously added a 20 cm thick layer of sand. He had then ploughed this sandy sediment under the clayey cultivation layer. In this case it concerned *c*. 5000 m^3 from different, private building projects in the surroundings of Doorn. This raising of the surface was necessary because the area was too wet for producing grass. He had ploughed this area deeper than usual, specifically for this ground improvement. The cattle farm of the tenant on the adjacent plot had been started up quite recently. Prior to building the stables in 2009, the excavated soil for the new manure collection area had been spread out over the plot.

If we now try to situate the find spot in its Bronze Age setting, the geomorphogenetic map by Berendsen (1982) indicates the presence of a zone of bank and channel deposits running parallel with the *Hollendewagenweg*, with a single residual gully with northwest-southeast orientation (fig. 5). As remarked before, two socketed axes have been found nearby. Previous field research on the find spot of the socketed axes site in 2006 gave a better insight into the natural, complex environment of point bar deposits. Corings and trial trenches indicated the presence of four parallel residual gullies, with slanted sediments. These lateral accretion deposits were formed by the main stream of a meandering river that over time changed its course to the southwest (Theunissen *et al*. 2008, 49). The result is a

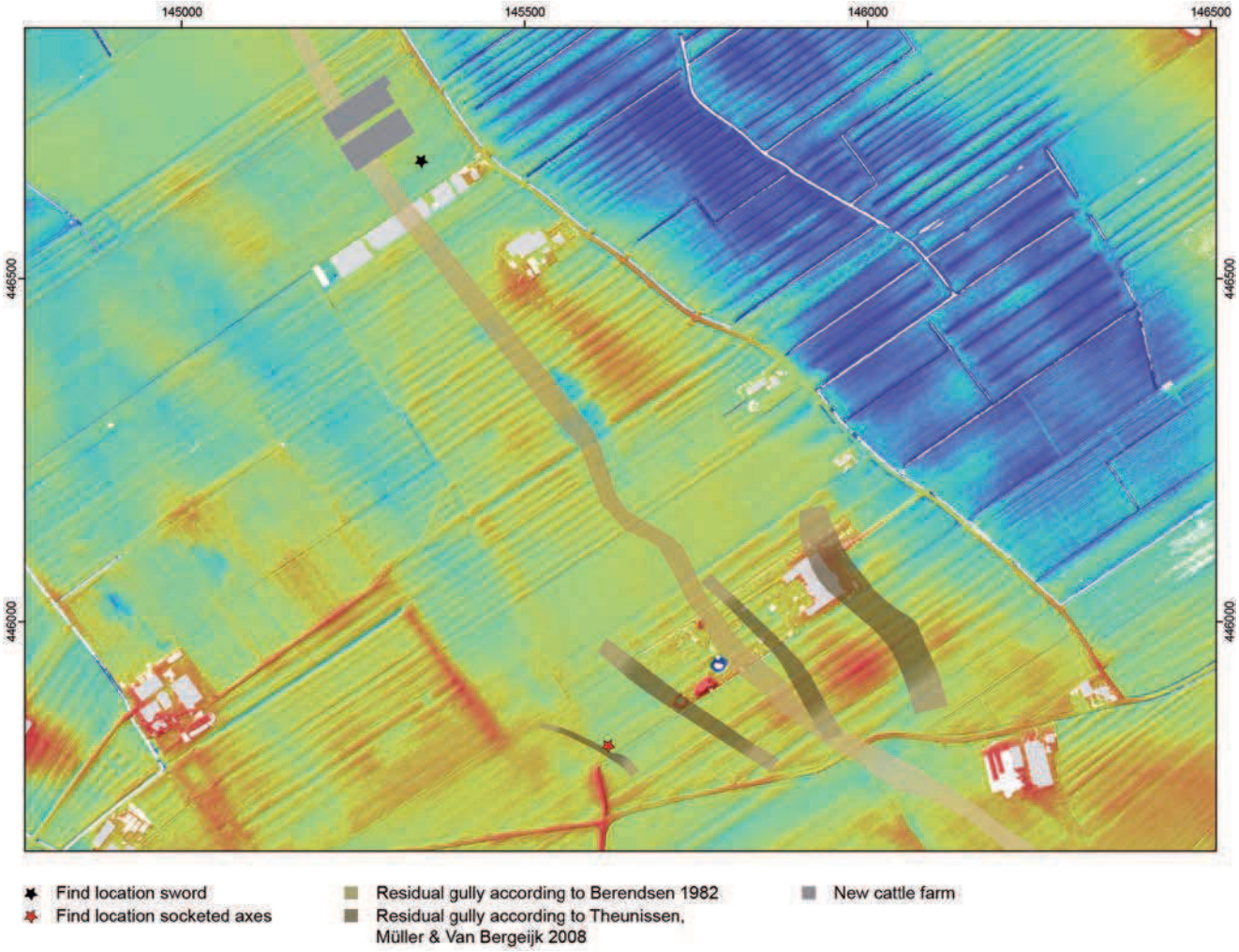

Figure 5 An overview of the fluvial landscape near Werkhoven, shown as a detailed elevation map with four identified residual gullies. (Based on the Aktueel Hoogtebestand Nederland 2 (www.AHN.nl)).

landscape of a former convex river bank characterized by a series of parallel gullies and small elevations. This landscape of point bars can also be discerned on the AHN2 (Digital elevation model). The residual gullies discovered in 2006 can (partially) be extrapolated northwards. It appears that the residual gully indicated by Berendsen can be related to residual gully 2. The find location of the sword appears to coincide with this elongated depression.

As discussed above, the sword has a specific patina, similar to the socketed axes. One side is black/dark green and the other is gold coloured. This indicates an oxygen-free environment which did not trigger corrosion: a wet and calm sedimentation environment. The question quickly arises whether the sword was primarily deposited in the point bar landscape, more specifically in a residual gully, or whether the object was found in a secondary position. As already indicated, however, sediments were deposited at this location twice. Firstly, the sediment derived from excavating a manure collecting area for the new cattle farm was spread over the plot. Then the sand from Doorn was used to raise the lower area by the *Hollendewagenweg*. The smooth and dark patina suggests that the sword came to lie at the surface rather recently. If the sword had lain in the top soil for longer than three months, thereby subjected to weather conditions, this would definitely have had consequences for the surface of the metal. Traces of the first degradation processes would have quickly become apparent. These processes have, however, not set in yet. This makes it most probable that the piece locally and recently came to lie at the surface. The first, most plausible scenario is that the sword came to the surface during

the deep ploughing done to work in the sandy sediments from Doorn. Recent damage to the blade of the sword is best explained as resulting from ploughing (see above). It is also possible that the sword derives from a deeper level excavated while creating the manure collection area.

4 Interpretation – an important location in the river area?

When interpreting this discovery, it is tempting to assume that the sword had always been located in the somewhat deeper clayey residual gully fill, right up until the moment that the single event of ground improvement ploughing brought it to the surface. It would seem rather straightforward to label the sword – just like the socketed axes – a deposition. A regional pattern seems to be emerging, whereby the late prehistoric community deliberately deposited bronze objects in the low-lying marshy areas of the point bar landscape and attributed these areas a special meaning (Fontijn 2002). There is a clear difference, however, between the two socketed axes that were both in mint condition, pristine and unused, and the sword which suffered damage and was heated and bent. Although the axes and the swords are not from the same location, ruling out that we are dealing with the remains of a hoard, they ended up in each other's vicinity in the same watery environment. The sword can only be broadly dated, but it may have been somewhat older (MBA B) than the axes (LBA). It might be ventured that we are dealing here with a multiple deposition zone that was repeatedly used to deposit metalwork (Fontijn 2002, 260-265). This zone probably was a remote area in the world of Bronze Age people. Settlement sites are known much further to the north, at a distance of at least two km. Unfortunately, nothing is known on the environment, the vegetation and accessibility of the location at the time the sword was left here. Whether it was an unaltered 'natural' place, or marked by some man-made construction remains an open question.

It is desirable that in the near future a local predictive model for depositions is created for this part of the Werkhovense channel belt. This map could then be tested in collaboration with amateur archaeologists with metal detectors. Only then does proper archaeological heritage management of this kind of special, but difficult to locate areas, become feasible.

5 Summing up

This contribution describes a remarkable bronze sword that was found in 2011 by an amateur archaeologist south of the village of Werkhoven, the Netherlands. It is a *Griffplatten-schwert* that can on the basis of its form broadly be dated to the 13th to 11th century BC. XRF measurements show that it is a tin bronze containing a very low percentage of other metals. At the upper part of the blade it carries a remarkable decoration of small dots, hatches and large dots on one side, and of small dots only at the other. For the small dots decoration a few parallels could be found on other swords in Northwest and Central Europe, but the combination with hatches and large dots so far seems to be unique. The sword never seems to have been properly finished, but does show quite some damage that results from blows (with metal implements). It was bent into an L-shape, which probably involved heating. So, we seem to be dealing with an object that was decorated in a highly unusual way, and then ostentatiously damaged and transformed. All the extra efforts suggest that this transformation was not done for purely pragmatic reasons (creating scrap metal for re-melting) but rather for religious/ritual reasons. We wish to suggest that the object was deliberately 'killed'. The location where the object came to rest – probably a gully in the river area – is another argument for ritual motivations. In the Bronze Age specific bronze objects like swords were from time to time removed from society and deliberately deposited in watery places.

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