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## **Monuments on the horizon : the formation of the barrow landscape throughout the 3rd and the 2nd millennium BCE**

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### **Citation**

Bourgeois, Q. P. J. (2013, January 10). *Monuments on the horizon : the formation of the barrow landscape throughout the 3rd and the 2nd millennium BCE*. Retrieved from <https://hdl.handle.net/1887/20381>

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**Title:** Monuments on the horizon : the formation of the barrow landscape throughout the 3<sup>rd</sup> and 2<sup>nd</sup> millennium BC

**Date:** 2013-01-10

## THE CREATION OF A BARROW LANDSCAPE: CONSTRUCTING NEW MOUNDS

### 8.1 Introduction

In the previous Chapter I focussed on the role of the individual barrow, and how it continued to be reinterpreted through time. The visibility, permanency and symbolic nature of the mound ensured it remained a stable element in the minds of prehistoric communities. In this Chapter the focus lies more on how time and again a new barrow was inserted into the wider landscape. Each new barrow is a purposeful modification of the barrow landscape and was carefully deliberated. As each new mound actively shaped and altered the form of the entire landscape, it permanently changed how the landscape could or should be interpreted (Barrett and Ko 2009, 288). The barrow landscape thus represents the sedimented activities and manipulations of generation upon generation of burial communities (*cf.* Ingold 1993, 167).

These constant manipulations and additions created intricate patterns of alignments and other features. It was a landscape where most of the time older monuments were present, and where each new barrow had to take into account the presence of these older monuments.

The way in which new barrows were added to the landscape changed significantly through time. As we have seen in Chapter 5, the long alignments are certainly typical for the Late Neolithic A, while the extensive dispersed barrow landscapes are more typical for the Bronze Age. In this Chapter I will try to understand these different types of barrow landscape. First I will set the stage in which barrows are built. At what rate were barrows constructed, and thus at what rate was the barrow landscape modified? And in what type of landscape were these barrows built, was it a lived-in landscape or rather a specific place set apart from the realm of the living? Having created the background I will summarize the general patterns of the different barrow landscapes through time followed by a discussion of what these patterns represent.

### 8.2 The frequency of barrow construction

The addition of a new barrow to the barrow landscape is a single event and limited in time. Specific episodes of barrow construction can be identified in each region, yet how often was a new barrow constructed? At what rate was the barrow landscape altered? The assumption is that during the Bronze Age more barrows were built than in the previous Late Neolithic period (Drenth and Lohof 2005, 453), but as we have already seen in Chapter 3, this is not necessarily so (see p.32).

Starting from the excavated and datable barrows in our database, we can then go on to calculate the number of barrows constructed during each chronological horizon. For the Late Neolithic A we have around 100 barrows over a period of about 400 years (see Table 3.1), which would translate to roughly one barrow constructed every three to four years. Similar frequencies can also be calculated for the Late Neolithic B and the Middle Bronze Age.

N barrows	Epe-Niersen				Renkum				Ermelo				Toterfout			
	110				71				134				55			
Period	LN A	LN B	EBA	MBA	LN A	LN B	EBA	MBA	LN A	LN B	EBA	MBA	LN A	LN B	EBA	MBA
<b>Excavated</b>	11	6	2	.	14	12	.	.	14	7	2	13	.	.	.	47
<b>Extrapolated</b>	33	18	6	.	33	28	.	.	52	26	7	48	.	.	.	55
<b>Barrow / N years</b>	~12	~22	~33	.	~12	~14	.	.	~8	~15	~29	~8	.	.	.	~7

Now the excavated barrows are only a fraction of the number of undatable or unexcavated barrows (see Chapter 5). In order to put the figures of excavated barrows into context we can turn to the case studies. If, for the sake of argument, we extrapolate the datable barrows to all known barrows within each case study, we can estimate with what frequency a new barrow was constructed in that area (Table 8.1; cf. Lowenborg 2009).

The frequency at which barrows were constructed on the Ermelo heath is then roughly once every 8 years for the Late Neolithic A, once every 10-12 years for the Late Neolithic B and once every 8 years for the Middle Bronze Age. Similar results are obtained for both Renkum and Epe-Niersen, though here, the Bronze Age is underrepresented (see Chapter 5). For the Toterfout region, we can assume one barrow was constructed every 4 to 5 years during the Middle Bronze Age.

Yet these estimates are severely limited by the amount of barrows which have survived throughout the millennia (Theunissen 1999, 49-53). As often mentioned in Chapter 4, the map formation processes fundamentally reduced the number of barrows available for study. Indeed, levelled barrows are frequently encountered during rescue excavations (e.g. Van Doesburg, *et al.* 2009; Roessingh 2010; Lohof, *et al.* 2011; De Smaele, *et al.* 2011 to name but a few recent ones) and large scale aerial photography surveys have discovered hundreds of barrows in areas previously devoid of burial monuments (e.g. Metz 1993; Meganck 2006; De Reu, *et al.* 2011a).

If we continue this line of thought, it follows that the intensity of barrow construction can easily be exponentially higher than the estimates presented above. Additionally they are strongly influenced by our ability to correctly attribute them to a specific chronological timeframe. These results should therefore be considered as an absolute minimum.

My conservative estimate for the Ermelo case study is that we have records for roughly half of the barrows which were once present in the area (see Chapter 5). Using this estimate, we are then dealing with on average one barrow being built every couple of years for the Ermelo area throughout prehistory. The same estimate can be applied to all other study areas.

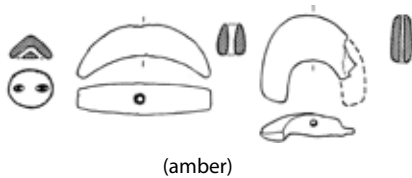
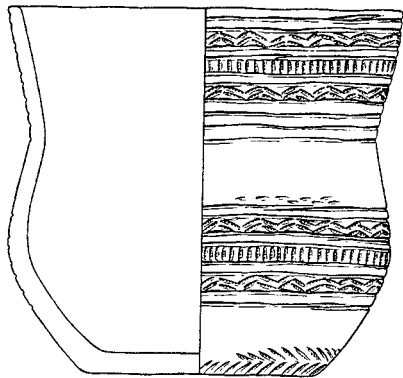
Now of course the rate of survival differs from region to region. And equally the rate of barrow construction will have differed over time and space. In the Southern Netherlands for example only a handful of barrows date to the Late Neolithic (Theunissen 1999, 57-58; Drenth and Lohof 2005, 433) and probably far fewer were built there than on the Veluwe. It is therefore difficult to extrapolate these estimates to the entire Low Countries. Nevertheless the conclusion for all case studies is that the general rate of barrow construction was relatively low, with a new mound erected every couple of years.

### 8.3 The episodic nature of barrow construction

At the same time it is important to realise that the construction of new barrows is not necessarily a continuous process. It may well be the case that multiple barrows were built at the same time or in quick succession of one another.

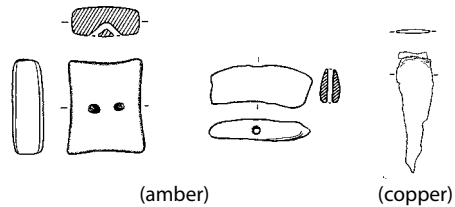
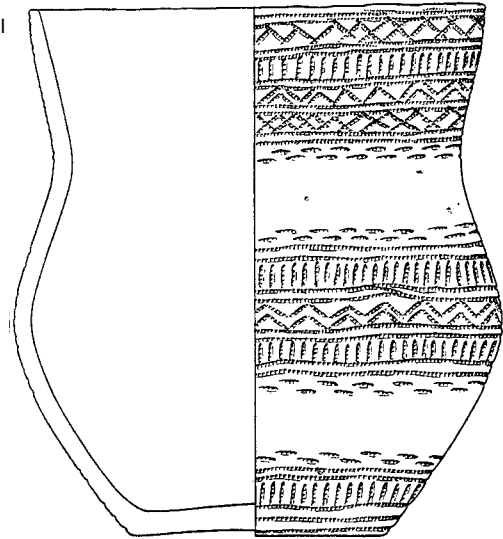
*Table 8.1: Extrapolation of the frequency of barrow construction within each research area. The extrapolation is on the basis of the excavated and unequivocally dated barrows. The percentage of excavated barrows dating to a certain period is assumed to be representative of the entire barrow assemblage.*

Vaassen Tumulus II (barrow 274):  
Finds from the  
primary grave



0 5 cm

Vaassen Tumulus III  
(barrow 275):  
Finds from the  
central grave



Finds from the top of the mound

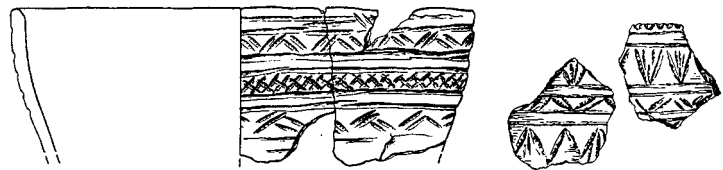


Fig. 8.1: Finds from the burials underneath and in Tumulus II and III at Vaassen (see fig. 7.15) (redrawn after Lanting and Van der Waals 1971b, Fig. 8 and 12; courtesy of the National Museum of Antiquities (RMO)).

Peaks and activity phases can certainly be reconstructed for specific periods and specific areas in the Low Countries. The linearity and regularity seen in the earliest phase of the Epe-Niersen alignment suggests it was built in a very short time frame. Most of the Late Neolithic A barrows on that alignment have AOO-pottery or GP daggers associated with them (at least four out of six). These artefacts are typical for the late phase of the Late Neolithic A and can probably be dated to within 150 years of one another (see Chapter 3; Wentink in prep.).

The Bell Beaker graves of Vaassen within the same region are another example. One grave was covered by a barrow, the other was dug into an already existing Late Neolithic A mound. Both graves contained strikingly similar grave goods (Fig. 8.1). Not only did they both contain similar amber beads, the decoration patterns on both beakers (and on a smashed beaker on top of one of the mounds) were very much alike. While there are small differences, I would argue that they are more alike one another than to any other Bell Beaker found on the Veluwe.

At Ermelo as well, the similarity in grave goods between two adjacent barrows strongly suggests they were built within a short time of one another (Tumuli II and III; barrows 325 and 326; Modderman 1954). In both primary graves, two beakers were found along with a single flint blade (Fig. 8.2). Both sets of beakers are of a similar type (1d) and even their position within the grave mimics their relative position to one another. The beaker set in the eastern barrow (326) was

Ermelose Heide Tumulus II (barrow 325): Finds from the primary grave

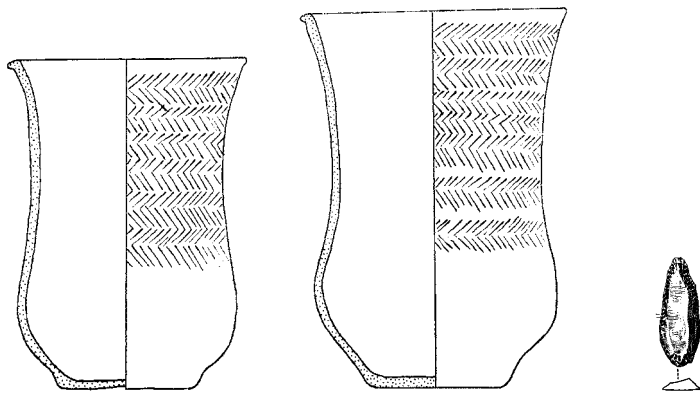
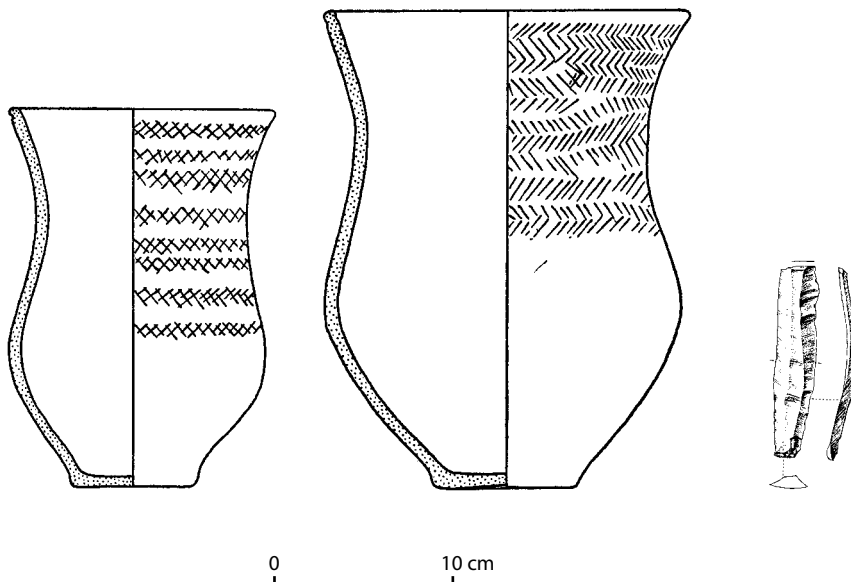


Fig. 8.2: Finds from the primary graves underneath Tumulus II and III at the Ermelose Heide (redrawn after Modderman 1954, Fig. 5 and 7).

Ermelose Heide Tumulus III (barrow 326): Finds from the primary grave



found in the eastern part of the burial pit, at the feet of the inhumation. The beaker set in the western barrow (325) was found in the western part of the burial pit, at the head of the inhumation. The flint blade in both was found in the pelvic region. Both inhumations were lying on their right side, facing south. Similar grave sets are very rare in the Netherlands and only three other such sets are known (see Wentink in prep.).<sup>44</sup>

I would argue that the similarities seen in both the Vaassen and Ermelo examples strongly suggests that neither was separated by a vast amount of time and may even have been constructed simultaneously.

Similar activity phases have been proposed for the Bronze Age in Denmark. Dendrochronological research of oak-log coffins in Denmark dates almost all of them within 50 years of one another (Holst, *et al.* 2001, 131-132) and it has been estimated that almost half of the 86.000 recorded Danish barrows must be dated to the Early Bronze Age (Johansen, *et al.* 2004, 34; *cf.* Beck, *et al.* 2007, 838-840). Comparable episodic barrow construction has also been suggested for Early Bronze Age round barrows in Southern England (Garwood 2007, 37).

44 AMP0466 Zeijerveld, Jodenbergje; AMP0038 Swalmen h4; AMP0429 Ede Ginkelse Heide

So the frequency of barrow construction remained relatively constant throughout the 3<sup>rd</sup> and 2<sup>nd</sup> Millennium BC (with the exception of the Early Bronze Age). Within any given region, on average one new barrow was constructed every few years. As with the secondary graves (see Chapter 7), the construction could occur in very short spurts, with several barrows being constructed in quick succession.

#### 8.4 Heathland Barrows

As this Chapter focuses more on the landscape in which the barrows were constructed, it is imperative to understand what type of landscape these burial monuments were placed in. In Chapter 6 we already established that most barrows were constructed in heath (see p.125). I made the point that even though barrows were constructed in heath, forests were present close by. The vegetation reconstructions I presented there function more as a minimum extent of the heath within an otherwise difficult to grasp vegetation pattern. The heaths may well have been substantially bigger than the distribution of the burial mounds let us to assume.

To illustrate this point we can turn to the palynological evidence. As I argued in Chapter 6, we can extrapolate the palynological data underneath sampled barrows (see p. 127). As all pollen underneath these barrows indicate heath (N=118; Doorenbosch in prep.; cf. Casparie and Groenman-Van Waateringe 1980), we can extrapolate this heath to all known barrows (on Pleistocene sandy soils). In this way, a barrow becomes a proxy for heathland as all barrows are built on *fully developed* heaths (Doorenbosch 2011). The last point is important as it demonstrates that barrows were built in a heath, but also that this heath was present long before any barrows were built. At least a few decades are needed before heath establishes itself (Doorenbosch in prep.).

The implication is that even underneath the earliest barrows, in the Late Neolithic A, heathland was present (cf. Casparie and Groenman-Van Waateringe 1980; Doorenbosch in prep.). If we take the northern alignment of Ermelo for example, a minimum of slightly under 1 km<sup>2</sup> would have been open heathland.<sup>45</sup> The same applies to the Niersen alignment, where at least 1 km<sup>2</sup> of heathland must be reconstructed. At the Renkum case study, a minimum of 3 km<sup>2</sup> must be considered to have been heathland.

These estimates depart from the excavated and datable barrows. If we take into consideration the many destroyed, unexcavated and undatable barrows (usually more than 50% within the case studies), it follows that the heathlands must have been much more extensive. Even in the earliest phase of barrow construction, extensive tracts of land were open and covered in heath or grasses. Especially the alignments on the Veluwe will have been located in large open areas.

The consequence of these reconstructions is that every barrow on the Pleistocene sandy soils will have been built in an anthropogenic landscape (Johansen, *et al.* 2004, 36). Once heath vegetation has established itself, it needs to be maintained or other types of vegetation will quickly take over. Heath can be managed through either burning, grazing or sod-cutting (Stortelder, *et al.* 1996). As we are dealing with substantial heathlands, the cutting of sods can almost certainly be ruled out (Doorenbosch 2011, 120-121).<sup>46</sup> Between both burning and grazing, the latter seems the more probable (they may also have occurred together as a rejuvenation

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45 For these estimates a heath with a radius of 250 m was used (see Chapter 6).

46 Calculations of the surface needed to cut sods for a large Iron Age mound on the Veluwe indicated that just a few hundred square metres are sufficient (Doorenbosch 2011, 120).

Toponiem	Barrow ID	Primary mound construction	Remarks	References
Toterfout-Halve Mijl Tumulus 1B	10	MBA	Several postholes underneath the annex and the primary mound.	Glasbergen 1954a
Toterfout-Halve Mijl Tumulus 14	23	MBA	Single row of posts splitting into two different rows. According to Glasbergen it is part of the same structure as underneath Tumulus 21.	Glasbergen 1954a
Toterfout-Halve Mijl Tumulus 21	30	MBA	Row of posts. According to Glasbergen it is part of the same structure as underneath Tumulus 14.	Glasbergen 1954a
Putten	409	LN A	The primary barrow covered a pit in which sherds of a large Wellenband-pot were found.	Van Giffen, <i>et al.</i> 1971
Epe-Emst 'Doppelhügel'	443	LN B	Two four-post structures were found underneath the foot of the third mound phase.	Van Giffen 1930
De Eeze heuvel IV	447	LN A	Pit with fragments of pottery (indet.).	Waterbolk 1964
Oosterwolde Langedijk Tumulus II	551	LN A	Several dark (charcoal-filled?) pits are visible on a photograph of the level underneath the mound.	Van Giffen 1930
Elp Smalbroekseweg	616	MBA	Three charcoal-filled pits were discovered underneath the mound. Several house-plans were also discovered in close proximity of the barrow.	Waterbolk 1961; Waterbolk 1964
Niersen Galgenberg heuvel G4	635	LN	three post-holes underneath the mound, not conforming to any apparent structure.	Holwerda 1908
Apeldoorn Wieselse Weg barrow 1	.	LN	Several postholes and pits with pottery covered by the barrow.	Fontijn, <i>et al.</i> In press.
Rhene Elst barrow 'Delfin 190'	.	MBA	Several pits with burnt stone and burnt MBA pottery covered by the barrow.	Fontijn 2010
Meteren De Bogen	.	MBA	The posts of a MBA house plan were found, possibly built on top of an already pre-existing barrow.	Bourgeois and Fontijn 2008

technique, see Karg 2007, 46). Especially if we consider that the heaths were maintained for millennia, then it follows that barrows were placed in areas where human presence was constant, both before and after the construction of barrows.

Other elements indicating human presence are rare. As far as we know, most barrows were not built in close proximity to settlements (Bourgeois and Arnoldussen 2006; Bourgeois and Fontijn 2008; Arnoldussen 2008, 437-441). Of all barrows recorded in our database, only a marginal number has evidence for elements associated with settlements (house-plans, discarded pottery and flint, postholes and pits; Table 8.2). This, in and of itself, is not so surprising as evidence for settlements is elusive for both the Late Neolithic and the first half of the Middle Bronze Age (Drenth, *et al.* 2008; Arnoldussen 2008; Arnoldussen and Fontijn 2007).

Evidence for arable fields close to the barrows is equally elusive. Pollen of cereals have been found underneath 38 barrows (42%), though most of these consist of percentages lower than 1% (in most cases no more than one or two pollen of cereal, Doorenbosch in prep.). It is however unclear whether or not this then represents agricultural fields in the direct vicinity. Unequivocal evidence for agriculture (through plough marks) has been found underneath five barrows (Table 8.3). Presumed arable layers have been found under several other barrows although the interpretation of these is debatable (see Fokkens, *et al.* 2009, 103-105). Especially older claims of arable land are difficult to verify.

Both the lack of evidence for settlements as well as the low evidence for agriculture would suggest that barrows were built some distance away from settlements. Yet this is not away from human activity as the heaths themselves represent an important economic zone. If we accept they were maintained by grazing herds of cattle or sheep, then these heathlands will have been fully incorporated in the activities of the living. It would have been a place where people wandered through with their herds.

Table 8.2: Evidence for settlements associated with burial mounds in the Low Countries. Only evidence for approximately contemporaneous settlements in direct association with a barrow has been considered.



Sitename	Barrow ID	Primary mound construction	Remarks	Literature
Hijken Hooghalen Tumulus 5	465	MBA	Plough-marks underneath the mound	Lanting and Van der Veen 1991
Hijken Hooghalen Tumulus 6	466	MBA	Plough-marks underneath the extent of the primary mound	Lanting and Van der Veen 1991
Gasteren Tumulus nr. 14	504	LN B or EBA	Plough-marks underneath the mound	Lanting 1973
Eext 't Witzand	535	EBA	Plough-marks underneath the extent of the primary mound	Jager 1985
Oostwoud Tumulus 2	.	LN B or EBA	Plough-marks underneath the mound and in a later phase around it	Lanting and Van der Plicht 2001

Table 8.3: Evidence of arable land underneath or in the immediate vicinity of burial mounds.

These observations are in accordance with Danish data on SGC barrows (Andersen 1994-1995; Kristiansen 1998, 282). The heathland found under their SGC barrows is interpreted in terms of pasture, while for later periods the importance of heathland is also recognised in Southern England (Bradley and Fraser 2010; Fleming 1971) and Belgium (Bourgeois 1995). Especially the symbolic role of heathland as pasture during the Bronze Age has been emphasised by Kristiansen and Larsson (Kristiansen and Larsson 2005, 226, 242; see Hannon, *et al.* 2008 for a similar view).

I have now tried to set the stage in which barrows were built. The evidence suggests most if not all barrows were built on heath, usually some distance away from any form of settlement.<sup>47</sup> The heathlands were already present long before barrows were built, and it is highly likely that they were in use as pastures. The consequence is then that burial activities predominantly took place on heathland. Every few years prehistoric communities created visual symbols on extensive and managed heathlands. Each new mound was purposefully fitted into the wider landscape. The relentless repetition and short bursts of construction activity created complex relational barrow landscapes.

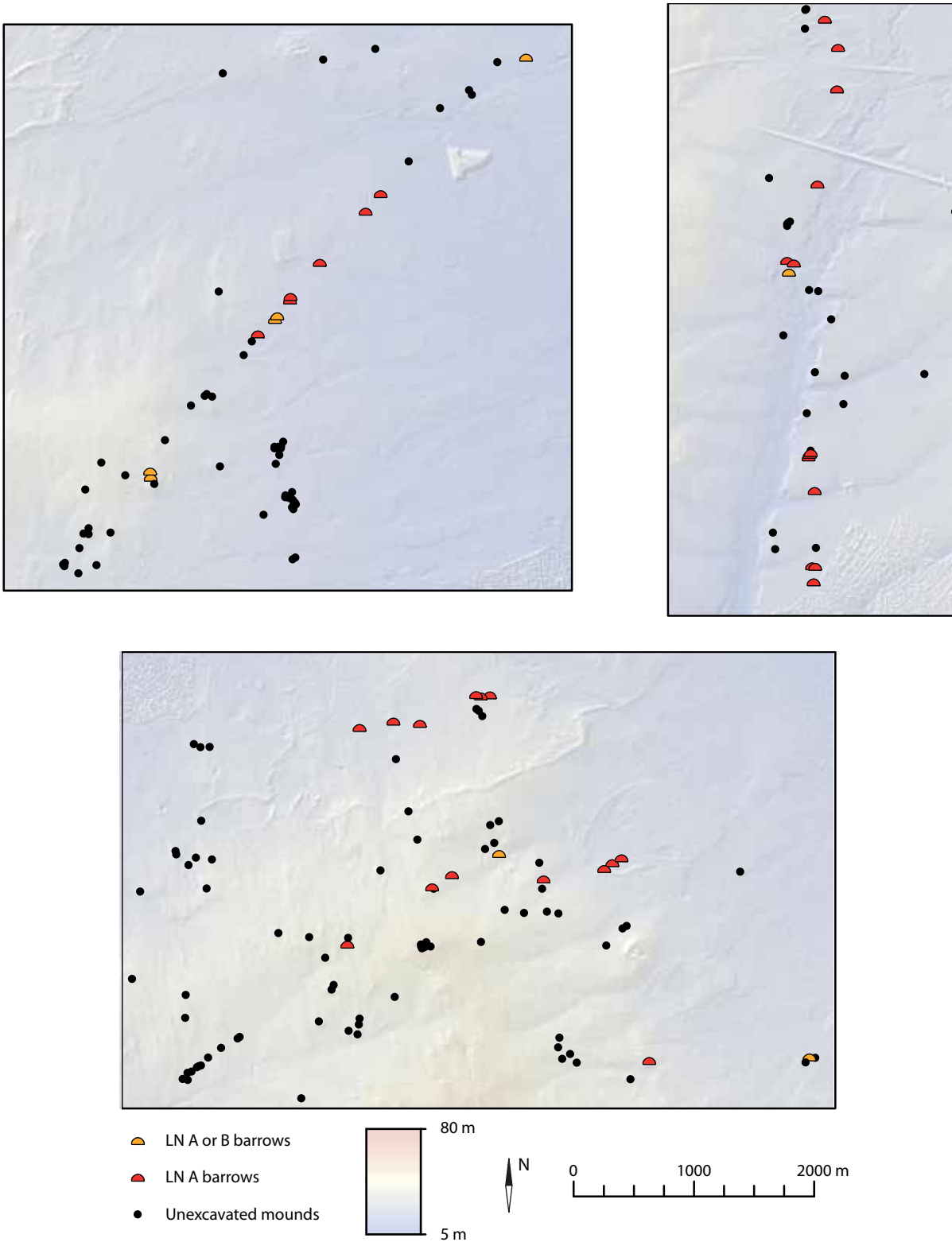
## 8.5 Barrow landscapes in the Low Countries

What are then the characteristics of barrow landscapes in the Low Countries and what are the patterns in which these barrows were fitted into the landscape? I will first present a short summary of the observations made in the case studies in Chapter 5 and attempt to place them in a wider context.

### 8.5.1 Late Neolithic A

Typical for the Late Neolithic A, is that most of the barrows are placed in long alignments. In the three case studies on the Veluwe, a minimum of three to four alignments have been identified (Fig. 8.3). Each alignment consists of at least six barrows, over a minimum distance of 1 to 1,5 km. These distances should be considered an absolute minimum as taphonomical processes and unexcavated barrows on the same alignment could easily have extended them beyond 2 to 3 km. Large scale heath reclamation and afforestation programmes as well as agriculture and urbanization have all destroyed barrows, reducing the alignments to a large extent (see Chapter 4). It is therefore rather surprising that any of these alignments are recognisable at all (*cf.* Løvschal in press., p.8)!

<sup>47</sup> It is important to realize that this reconstruction is only valid for burial mounds on the Pleistocene sandy soils, the situation in the Holocene region was probably very different.



All alignments share the same characteristics. There is a regularity and order in the placement of each individual barrow. Firstly barrows are placed singly, in pairs and in a few rare cases in triples.<sup>48</sup> The similarity between some twin barrows suggests they are built within a short time of one another (e.g. the Ermelo case).

Fig. 8.3: Overview of all Late Neolithic A alignments in the research areas on the Veluwe.

<sup>48</sup> In pairs and triples is defined as all within 100 m of one another.

Secondly the closest neighbouring barrow(s) are then built a few hundred metres away. The distance between each barrow is fairly regular, and is repeated along the alignment. For instance, the distance between the barrows with ascertained locations on the Epe-Niersen alignment is approximately 400 m from one another. Thirdly, each new barrow is placed along one single axis. For the Epe-Niersen alignment this axis is a straight line with at least four barrows being placed exactly on that axis. For the Renkum and especially the Ermelo alignments this axis is less strictly defined and they keep to a general North-South and East West orientation respectively.

Next to these alignments, isolated barrows can be found. Especially in the Epe-Niersen case study, at least six barrows are placed around the dry valley without direct evidence for contemporaneous alignments. It should be mentioned though that Bakker includes at least three of these in additional alignments (Bakker 2008). Indeed, if we include the many unexcavated barrows in the analysis, they do seem to be placed along other alignments, although it is impossible to date these (see Chapter 5). While it does not seem to be the case that *all* Late Neolithic A barrows were placed on alignments, the majority certainly were.

Barrow alignments are certainly not isolated to the Veluwe and they were part of a wider phenomenon typical for the early 3<sup>rd</sup> Millennium BC. In Drenthe a long 'barrow road' is found along the *Hondsrug* (Jager 1985; Bakker 1976) with most of the barrows dating to the Late Neolithic A. Recently it has been suggested that at Angelslo-Emmerhout a similar alignment may be found (Arnoldussen and Scheele 2011). Especially in Denmark, long alignments of Corded Ware burial mounds have been recognised early on (Müller 1904; Mathiassen 1948; Johansen, *et al.* 2004, 37; Johannsen and Laursen 2010). Shorter alignments are also known from southern England, although these seem to date slightly later to the Bell Beaker phase (Lawson 2007, 152-153).

### 8.5.2 Late Neolithic B

On the level of the individual barrow in the Late Neolithic B, the characteristics of how a barrow is placed within the landscape is very similar to the Late Neolithic A. Barrows occur singly, in pairs and in a few rare cases in triples. Once again similarities between burial practices certainly suggest little time occurred between the construction of these mounds (*e.g.* Ermelo Tumuli 356-358 and Vaassen, see above).

The practice of building on an alignment is sporadically continued in the Bell Beaker period. Both the Epe-Niersen and the Renkum alignment are extended and added upon in the Late Neolithic B (see Chapter 5).

Yet the placement of barrows within the wider landscape is entirely different. This difference can best be illustrated through the Renkum case study. While a few new barrows are placed on the older barrow alignment, most are built far away from it. Indeed it can be said that if almost all of the Late Neolithic A barrows were added to a singular larger structure, most Late Neolithic B barrows are built well away from one another. As already mentioned for the Renkum case in Chapter 5, the 13 Late Neolithic A barrows were placed in a relatively restricted area of 3 km<sup>2</sup>. The 12 Late Neolithic B barrows on the contrary are distributed over an area of approximately 20 - 25 km<sup>2</sup>. This contrast is even more dramatic if we include all barrows of the Ede-Wageningen ice-pushed ridge (Fig. 8.4).

Both the adherence to the alignments as well as the expansion into new areas are also seen in the Epe-Niersen and Ermelo case studies. In areas where no alignments are present – and no earlier barrows for that matter, such as the Southern Netherlands – Late Neolithic B barrows are built far from one another. The burial

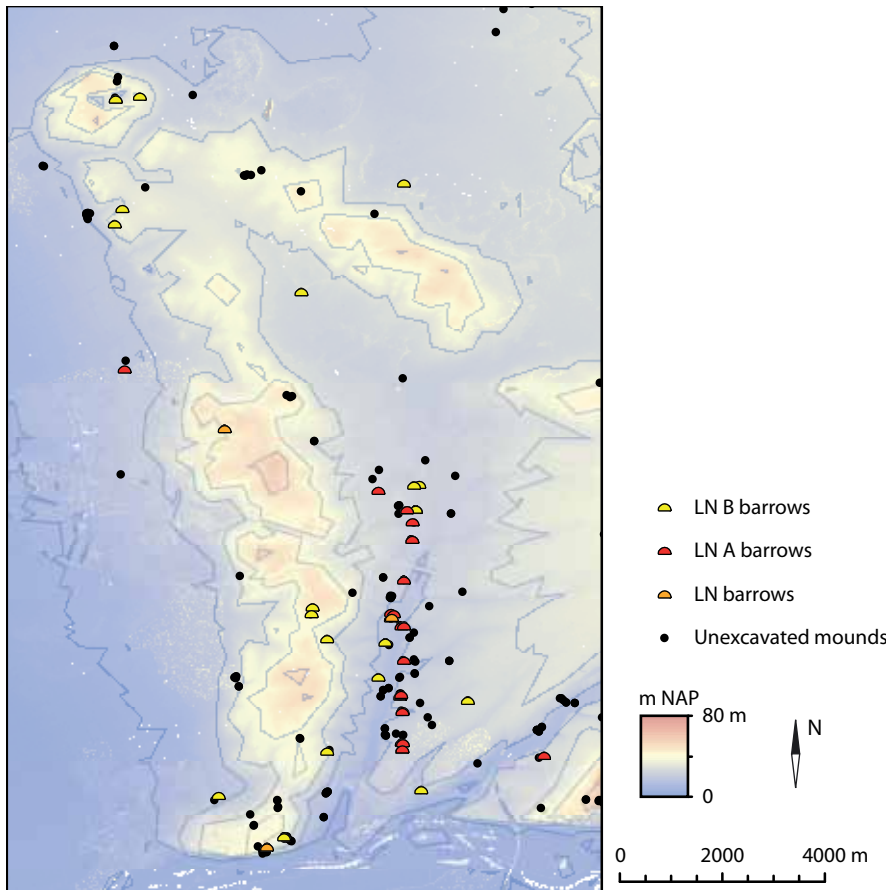


Fig. 8.4: All Neolithic barrows in the wider Renkum stream valley (including the Ede-Lunteren barrows to the North-West).

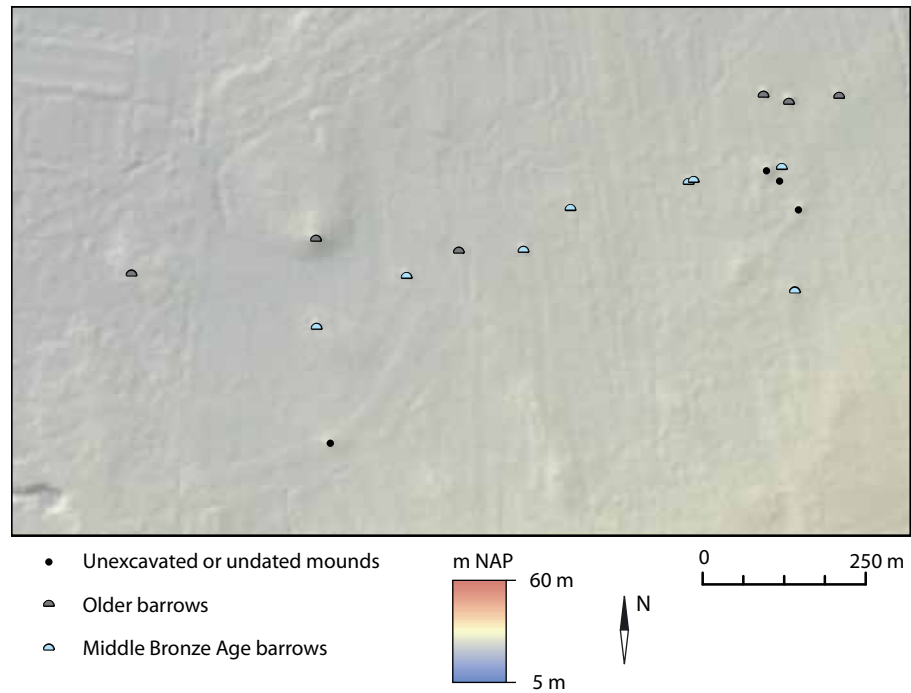
mounds of Schaijk, Oss Vorstengrafdonk, Meerlo and Mol are all isolated and solitary burial monuments (Van Giffen 1949a; Bursch 1937; Verwers 1964; Beex and Roosens 1962). Even though some of these mounds develop into focal points for later additions, as far as we now, no contemporaneous barrows were built in their immediate vicinity. This practice originated in the Late Neolithic A, with a few barrows associated with AOO pottery, already having been built in apparent isolation (*e.g.* Bergeijk Witrijt, Beex 1957; Baexem and Millert, Hulst, *et al.* 1973).

So in essence, new Bell Beaker barrows are built far apart from one another resulting in a diffuse pattern. Especially where no older barrows are present, new mounds are built in groups of up to three with the next closest barrows at least several hundred metres away.

### 8.5.3 The Early Bronze Age intermezzo

The low numbers of barrows constructed during this period make it difficult to understand the Early Bronze Age barrow landscape. The alignments of the Late Neolithic are in some cases respected and still added upon. Both at Epe-Niersen and Ermelo, there are indications of reuse for some older mounds but possibly also of new barrows being constructed. While they keep revering past barrows, the construction of a new barrow does seem to be a rare event, perhaps restricted to only once every generation or even less.

Fig. 8.5: Detail of the northern alignment in the Ermelo research area. The Middle Bronze Age barrows are placed amongst and in-between the Neolithic mounds.



#### 8.5.4 Middle Bronze Age

As we have seen in Chapter 7, the Bronze Age attitude towards barrow landscapes is significantly different than during the previous periods. Whereas in the Late Neolithic barrows were built singly, in pairs or in triples, during the Middle Bronze Age barrows are built in much closer proximity of one another. Clusters of more than 3 barrows within 100 m of one another are now very common. In terms of frequency of barrow construction however, not much seems to change.

Where older barrows are present, the presence of those older barrows seems to be acknowledged. The new barrows are constructed in recognition of the older structures. At Ermelo, Bronze Age barrows are built along the same axis of the northern Late Neolithic alignment (Fig. 8.5). For both Renkum and the Epe-Niersen alignments, the reaction and additions of new barrows is less clear, although some new barrows have certainly been built amongst the Neolithic barrows (*e.g.* barrow 4518).

Even though they respect the older alignments, and in rare cases copy them, the larger alignments seem to have been abandoned. The general distribution of Bronze Age barrows is much more dispersed and similar to the Late Neolithic B. The Toterfout case, as a Bronze Age barrow landscape par excellence, illustrates this diffuse distribution nicely. Almost every part of the cover sand ridges encircling the swamps and lakes of the *Postelse Weijer* are dotted with barrows. Construction of new barrows does not seem to be limited to any pre-built structures but rather confined to the heathlands in general. They cluster in some areas, though without forming any clear cut patterns or (long) lines. The distribution seems indiscriminate and almost wilfully dispersed.

Nevertheless shorter alignments of barrows are known. One alignment of four barrows at Toterfout is ca. 100 m from beginning to start. Each barrow is placed no more than 10 – 20 m from the other. A slightly longer alignment is known at Goirle, where 6 barrows, all dating to the Middle Bronze Age are placed in one line over a length of no more than 400 m (Van Giffen 1937a; see Fig. 2.1). There are several more examples of such short alignments for the Bronze Age (*e.g.* Oss-Zevenbergen, Fokkens, *et al.* 2009, 210-211; Epe-Rendierklippen, Bursch 1933a, 63-69; Oedelem-Wulfsberge, Cherretté and Bourgeois 2003).

Such short alignments are well known from England in the Early Bronze Age (Bradley 2007, 164-165), and especially around Stonehenge such rows are common (*e.g.* The Old and New Kings barrow groups, Lawson 2007; The Normanton Down group, Needham, *et al.* 2010).

## 8.6 Understanding barrow landscapes

In essence there are two major types of barrow landscapes. On the one hand the structured barrow landscapes of the Late Neolithic A, with alignments and lines in the landscape. On the other hand, the more ephemeral and difficult to understand dispersed barrow groups of both the Late Neolithic B and the Middle Bronze Age. While structures such as small alignments are certainly present in the latter, they are much more limited in scale and do not extend beyond a few hundred metres.

### 8.6.1 Barrow Lines

Barrow alignments are typical features of the Late Neolithic A, not only in the Low Countries but also beyond. Especially in Denmark, long alignments of barrows certainly start in the Late Neolithic (Hübner 2005, Beilage 2.1; Johannsen and Laursen 2010, 39; Geschwinde 2012).

Firstly, the linearity and regularity of the alignments suggests they may be orientated towards something. For example, it has been suggested for the Epe-Nielsen alignment that it is orientated exactly on the midwinter sunset or the midsummer sunrise (by Garwood as quoted in Bakker 2008, p.282). An alternative orientation on the southernmost moonset or the northernmost moonrise has been suggested for this alignment as well (*idem.*; Van Baarle 2009, 79-83; Fig. 8.6).<sup>49</sup>

The second hypothesis can be shown to be false. The position of the southernmost major lunar standstill in this region occurred at approximately 214°. The earliest phase of the alignment is orientated at 221°, several degrees to the west of the lunar standstill. Furthermore, if we take into account the influence the horizon and the vegetation had on the moonset, the moon would have set even more to the east, at around 211 or 212°, a difference of almost 10°.

The first hypothesis is more suggestive. The midwinter sunset in this region occurred at 228-229°, while the axis of the alignment is orientated at 221°. If we take into account the influence of the horizon and the vegetation at the time, the sun would have set at approximately 225° during the midwinter solstice. With a difference of only 4 degrees, and the sun itself already being half a degree in size, the alignment and the midwinter sunset almost align.

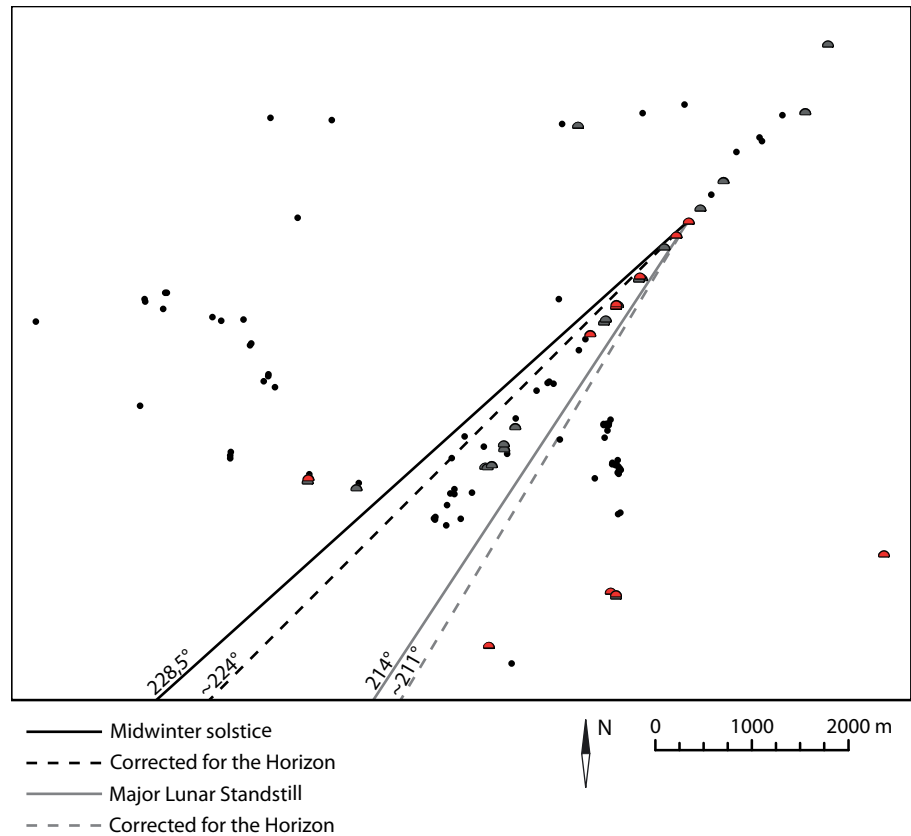
Whether or not this was significant in the positioning of these barrows is left open to discussion. Whatever the case may be, it is only valid for the earliest phase of the Epe-Nielsen alignment and not for any of the other alignments on the Veluwe, which are all orientated differently. This suggests that an orientation on celestial bodies was not the primary reason why an alignment is orientated towards a certain point.

The most common, and perhaps practical, explanation for these alignments is that they are assumed to indicate road patterns and communication routes (Müller 1904; Mathiassen 1948; Bakker 1976; Bakker 2008; Klok 1982; Holst, *et al.* 2001; Johansen, *et al.* 2004; Johannsen and Laursen 2010 and Løvschal *in press.*).

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49 All sunsets and sunrises as well as the southernmost positions of the moon for the period around 2550 cal BC were calculated with the help of NASA's Horizons integrator (<http://ssd.jpl.nasa.gov/horizons.cgi>). The influence of the horizons and vegetation was calculated with the help of ArcMap 10. For each sunset and moonset the atmospheric refraction was also accounted for. I would like to thank dr. M. Langbroek for his extensive help with the calculations!

Fig. 8.6: The Epe-Niersen alignment and the axis of the midwinter solstice and the major lunar standstill (solid line). The dashed line indicates its approximate position depending on the horizon.



The discussion whether or not these barrows indicate roads is certainly a difficult one and in most cases several arguments in favour and against can be put forward (Thrane 1998, 273-274). The Epe-Niersen alignment, while (almost) orientated on the midwinter sunset,<sup>50</sup> is also directed towards the smallest crossing point of a stream valley to the north and perhaps a similar situation to the south. And even on the present day heath, cart tracks can be seen along the axis of the alignment (though they split up when reaching barrows). Certainly some of the cart tracks in the Epe-Niersen region are prehistoric in origin (*i.e.* older than parts of a Celtic Field, Brongers 1976, 58).

Yet the discussion of whether or not we are dealing with roads misses the point of why barrows were built in long alignments alongside a presumed road. Roads have been evidenced in urnfields on multiple occasions (Kooi 1979), yet none of these urnfields extend along the entire road. Furthermore roads and routes of travel are also known from earlier prehistoric societies (*e.g.* Bakker, *et al.* 1999, 783-784; Johannsen and Laursen 2010).

Rather the point is that during the Late Neolithic A communities erected monumental symbols of death and burial at specific intervals and along a single axis thus creating singular large man made structures. The resulting effect of the barrow lines is then to create a linear experience where movement along that line stands central and the succession and accumulation of barrows becomes important (*cf.* Løvschal in press.).

The dominating organizational structures of the Late Neolithic A barrow landscapes were thus ultimately about controlling movement. Indeed in most cases it will not have been possible, to perceive and see the entire alignment whilst standing on ground-level.<sup>51</sup> In this respect it is interesting to note that all articles

50 For some British examples see Garwood 2007, 41.

51 Or at least distinguish each individual barrow! See Chapter 6, p.130.

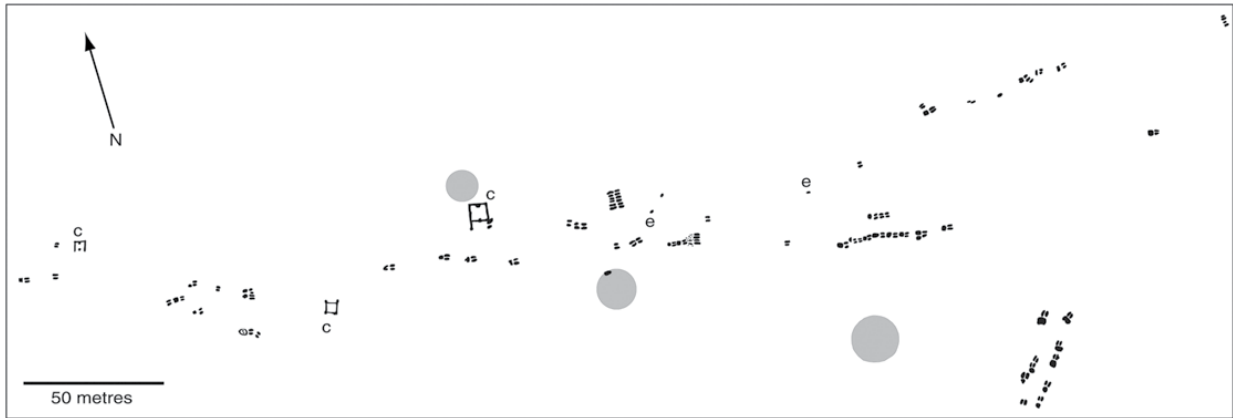


Fig. 8.7: The stone-heap graves of the Herrup stone heap grave cemetery, (after Johannsen and Laursen, 2010, fig. 10).

discussing barrow alignments use maps or aerial photographs to demonstrate the linearity (even this one)! Rather, the linearity of the alignment can only be experienced by walking along its length (see Chapter 6, *cf.* Løvschal in press., 14). Each new barrow built on that alignment reiterates and reifies the linear experience and becomes an anchor point guiding people along the entire axis.

When walking along the alignment, each barrow, placed at specific intervals, induces a certain reaction and recognition of what the mound stands for – *i.e.* the presence of past generations. Movement along that axis is framed by death. Whether or not they are located alongside a functioning road system or not, these alignments become a sacral landscape. People are walking along with the dead and along with genealogical and mythical histories of these dead (*cf.* Gosden and Lock 1998). As the alignment grows, each new barrow is placed within this fully semiotic landscape.

The lines of barrows reflect a direct concern with linearity and movement through the landscape which was typical for the early 3<sup>rd</sup> Millennium BC both in and beyond the Low Countries. To emphasise the role and social importance of movement during that period, we can turn to the slightly earlier stone heap graves of Jutland that have many similarities to the Single Grave Culture alignments. These graves usually consisted of one rectangular pit and two parallel oblong pits. The rectangular pit probably contained a wagon and a burial, while the oblong pits contained remains of a team of oxen (Johannsen and Laursen 2010). The pits were then covered in a heap of stones forming a small mound. The stone heap graves were placed in long alignments, in some cases extending as much as 1,2 to 1,7 km (Fig. 8.7; Fabricius 1996, 22; Johannsen and Laursen 2010, 33). Indeed, the chronologically later barrow alignments in these areas often followed the same axis as these stone heap graves (Johannsen and Laursen 2010, 39). The link between movement (the wagon and oxen pairs) and a specific direction (the common orientation of the graves) is explicit here (*ibid.*, 44).

While the stone heap graves represent a chronologically and geographically limited phenomenon (they only occurred on Jutland between 3100 and 2800 cal BC, *ibid.*), the praxis displays strong similarities with SGC alignments both in Denmark and beyond.

For the Low Countries, no such types of graves are known though the concern with both movement and linearity are widely evidenced for the slightly later SGC. It is for instance tantalizing, that multiple disc-wheels were deposited in the swamps of the Northern Netherlands during the same period that the alignments were built (Van der Waals 1964). Radiocarbon dates place these wheels unequivocally in the Late Neolithic A (Lanting and Van der Plicht 2001, 95-96). Equally



cattle seem to have taken up a special position in the grave ritual of the Low Countries (see Wentink in prep.). As such it is worth noting that in one of the graves on the Epe-Niersen alignment the skull of a cow was found (barrow 308). A discussion on the role of both cattle and wagons in the late 4<sup>th</sup> and early 3<sup>rd</sup> Millennium BC is beyond the scope of this thesis. Suffice to say that they both took up a central role in the burial ritual of the earliest barrow building communities (e.g. Ecsedy 1979; Sherratt 1981; 1997; Pollex 1999; Tureckij 2004; Anthony 2007; Towers, *et al.* 2010, 509-510) and reveal a deeply rooted concern with movement and linearity (e.g. Harrison and Heyd 2007, 135) in association with burial rituals.

Movement along the alignment was fixed at specific intervals with mortuary symbols which would seem to indicate that framing of movement with death was a central theme in the construction of the individual monuments. The defining elements were therefore the construction of the alignment and a mounds position within it (*cf.* Bender 1992, 748; Bender 1999, 39; Kuchler 1987) and this was not necessarily tied to the person buried underneath it. As far as we can tell there seems to have been no correlation between who was buried underneath a barrow or which grave goods accompanied them and their position on the alignment. If we take the Epe-Niersen alignment as an example, not one of the Late Neolithic A graves was identical. Even the fragmentary excavations by Holwerda reveal a diversity of burial practices. One barrow is associated with a fragment of a GP dagger, one covered the grave of a sitting individual, one is associated with a flint axe and a semi-flexed inhumation, another with the head of a cow, a GP dagger and two beakers while two barrows may not have covered a grave but are associated with sherds of AOO pottery (see p.59). For both Renkum and Ermelo no significant correlation can be discerned either. Heterogeneity would appear to have been a feature of the burial ritual on the alignments.

Yet on the other hand, the outward form of most barrows was very much alike. As far as we can tell (based on the better excavated examples) all were surrounded by a palisaded ditch and were of relative similar size. While the symbology employed in the grave ritual was diverse and flexible, the outward and visible symbol is identical, unchanging and fixed (*cf.* Rowlands 1993).

So when walking along an alignment, be it on a road or otherwise, one would encounter a monotonous succession of barrows. Visually all these burial monuments were alike, a strong suggestion that even though the grave ritual was heterogeneous and differentiated, the outward expression was not. And even though a mounded burial was likely reserved for only a few, in a sense they were all alike in death.

The visual effect of the alignments has already been explored in depth in Chapter 6. It was argued that even though the outward expression of each individual barrow was alike (*i.e.* they create a place more visible than others), some were visible from greater distances than others. Furthermore, each alignment guided visibility and thus movement along a specific axis. And especially specific barrows visible from great distances would have formed focal points towards which movement was orientated.

This can be demonstrated by the Epe-Niersen alignment where the barrows on the southern-end of the alignment crest the horizon along the entire length of the alignment creating a sense of directionality (see p.154-155). A skyline analysis places them invariably on the horizon when standing on top of each mound of the alignment. This manipulation of visibility and its combination with movement can also be seen in both the Ermelo and Renkum case.

The alignments were thus ultimately about movement along an axis. Whether or not this axis was then a road is a moot point. The intention was to create a succession of mortuary symbols when passing from one point to another.

### 8.6.2 *Dispersed barrow groups*

The second type of barrow landscape can be characterized by a seeming lack of organisation and an almost random distribution. These barrows rarely nucleate and are spread out over large distances. This situation is valid for both the Late Neolithic B and the Middle Bronze Age.

This almost unbounded type of distribution can be seen among the Late Neolithic B barrows on the ice-pushed ridge of Ede-Wageningen but equally among the Middle Bronze Age barrows on the cover sand ridges of the Toterfout barrow groups. While small scale structures such as small alignments did occur, in particular during the Bronze Age, they are never placed within a larger encompassing whole. Barrow construction departs from the larger alignments (although not abandoning them completely), and most new barrows are built far from them.

The dispersed nature of barrow distribution can not only be observed in the Low Countries. Dispersed barrow groups have also been recognised in England, Denmark and Germany (*e.g.* Ashbee 1960, 34; Woodward 2000, 80-85; Garwood 2007, 45; Løvschal in press.; Geschwinde 2000; Johansen, *et al.* 2004, 36). It has been argued that the dispersed nature of the barrows is difficult to understand and may conceal clustering on a smaller level (*e.g.* Woodward and Woodward 1996, 277). I would rather argue that the dispersed nature of the barrow landscape is not so much as a consequence of loose settlement organisation (*e.g.* Gerritsen 2003, 235), or a lack of a dominating social structure (*e.g.* Garwood 2007, 45-46), but rather that it was a fundamental feature of the Late Neolithic B and Bronze Age barrow landscape (*cf.* Fontijn 2011, 437).

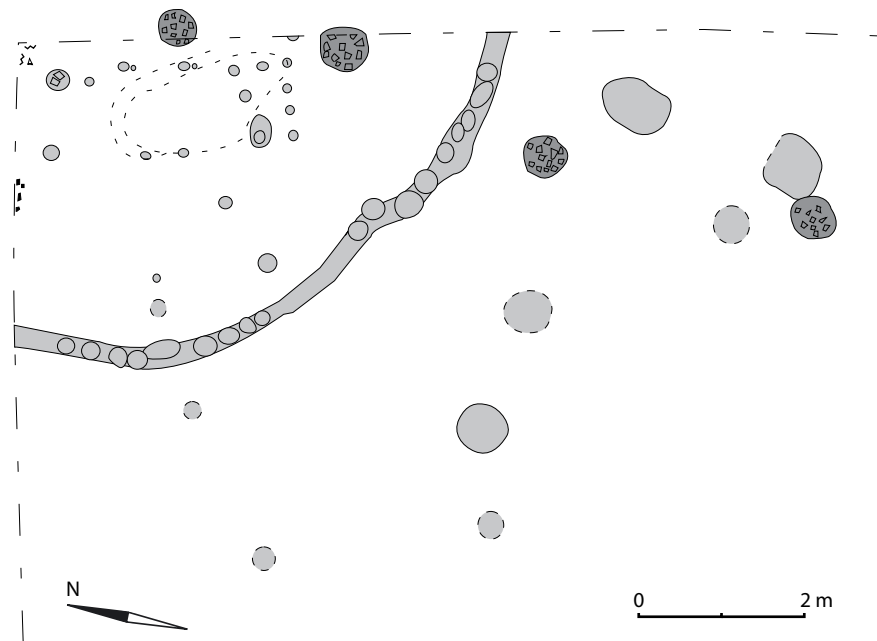
In the same light it is difficult not to see these expansions as colonization phases into new lands (*e.g.* Modderman 1962-1963, 11-12; Garwood 2007, 45-46). However, these expansion are not necessarily related to an expansion of heathland. The evidence only suggests that heath was already present when the earliest Bell Beaker barrows were built and that it was fully developed prior to the mound construction. The heath may have been present for centuries or only a few decades. Indeed, the heath may have been established in the Late Neolithic A. It is therefore not possible to correlate the expansion of barrows into new areas to the expansion of heath in those regions.

Instead I would argue that it is part of a shift in attitude towards the landscape. Whereas people in the Late Neolithic A deliberately placed each new barrow as part of a larger structure, in the Late Neolithic B and Middle Bronze Age, each barrow is almost wilfully dispersed. Especially in areas where no larger alignments are present the distribution of barrows appears to have been limited only by the presence of heath and not by a larger structuring principle.

This shift in attitude is supported by how barrows were reused in the Middle Bronze Age. We have already seen in Chapter 7 that reuse in that period was extended to all barrows on the heaths. Likewise the construction of a barrow was confined only to a specific part of the landscape, the heathland. Barrows were not built in the places where people lived, nor where they farmed. Rather they were built in pastures and heathlands. This was the place where the dead 'ought to be buried'.

It would be wrong however to characterise this use of the landscape as unstructured or loosely organised (see for example Gerritsen 2003, 235-237). There is clear evidence that the specific positioning of each individual barrow on these

Fig. 8.8: Preliminary excavation plan of barrow 1 at the Wiesselse Weg (municipality of Apeldoorn). The row of pits with burnt stones is indicated with the dark shading; light grey are other features. A fifth pit was discovered 50 m to the south. Extensive plough damage has destroyed several of the pits lying in-between (as testified by several fragments of burnt stones in the plough-marks).



heaths was governed by a pre-conceived idea of what goes where. This is made explicit through the use of post-circles at the Toterfout barrow group. The differences between the two types of post circles suggests two groups were actively constructing two entirely different types of burial monuments (see Chapter 5; Bourgeois and Fontijn 2012). Even though it is impossible to say whether or not they represent two contemporaneous groups, the distance in time between them will not have been more than a century. The opposition may have been governed by a division between two different clans, or perhaps two different households. Another option is that the division is based on sex (although the evidence for this is rather meagre; *cf.* Theunissen 1993; Bourgeois and Fontijn 2012). Either way, two (or more) communities expressed their presence in the landscape in a fundamentally different way.

Evidence of the structuring of space beyond the barrow is limited. Nevertheless, the few barrow excavations that extend beyond the foot of the mound reveal a complex set of practices all related to the burial monuments. The deposition of potbeakers and Barbed Wire Beakers at the foot of the mound has already been touched upon in Chapter 5. To this set of practices the rows of ‘cooking’ pits of the Wiesselse Weg excavations can be added (Fontijn and Louwen *in prep.*; Fig. 8.8). Here a row of at least six pits filled with burnt stones and burnt loam were aligned towards the centre of a Neolithic barrow. In one of the pits a fragment of a reworked amber spacer plate was uncovered and a radiocarbon date places the pits in the early half of the Middle Bronze Age ( $3285 \pm 40$ BP; calibrated between 1680 and 1450 cal BC at the  $2\sigma$  range). The digging of the pits is contemporaneous with the building of two barrows to the north as well as the placement of multiple secondary graves in them (see Chapter 5).

Occasionally post alignments have been uncovered beyond the extent of the mound itself, guiding people towards the mound and dictating how people ought to approach the barrow. Contemporaneity between such alignments of posts and burial monuments is very difficult to prove (see for example the extensive discussion on the alignments of the Oss Zevenbergen barrow complex, Fokkens, *et al.* 2009, 136-139). Nevertheless in several cases highly compelling evidence suggests

they were (notably Van Giffen 1949b). Similar post and pit-alignments have been uncovered in both Denmark and Germany (*e.g.* Wilhelmi 1986; Hübner 2005, 495; Freudenberg 2012).

These post settings and other practices, criss-crossing the landscape, indicate that these barrows were not randomly placed or that they were just following the wandering settlements (see Chapter 2). While the individual placing was confined to the very general concept of heathland, each barrow took a very specific role within these heaths. How each barrow was meant to be seen as well as approached was fully controlled.

## 8.7 Conclusion

It can be argued that the barrow landscape as we now know it developed in two distinct phases. The first phase with the lines and alignments of the Late Neolithic A. These were the earliest structures to be laid out in the landscape. The linearity and perhaps their association with roads and cattle suggest a concern with movement and structuring this movement within the landscape.

The second phase in the formation of the barrow landscape sets in as early as the Late Neolithic B. Here, the alignments of the Late Neolithic A were gradually abandoned (although never fully) and barrows became much more dispersed throughout the landscape. This dispersal was continued into the Middle Bronze Age and it is then that the full extent of the barrow landscape was reached. Afterwards, additions to the barrow landscape became much more localised.

In both Chapter 7 and 8 I discussed the patterns behind the formation of the barrow landscape. I have demonstrated how the barrow landscape came into being through several distinct activity phases. It was created in the Late Neolithic A, and added upon throughout the centuries. And I have argued in Chapter 7, how during the Middle Bronze Age, the entire barrow landscape was reworked. Yet we are now left with the question of how we should understand its development on a human scale. This will be the focus of the next and last Chapter.