

A Late Neolithic site of the Deûle-Escout Group(?) with two probable house-plans at Eine-Heurnestraat (mun. of Oudenaarde, East Flanders, BE)

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1. Introduction

This paper discusses the results of recent investigations that were carried out at Eine-Heurnestraat (mun. of Oudenaarde) in the Belgian province of East Flanders. They were carried out by order of the *Vlaamse Maatschappij voor Sociaal Wonen* (VMSW), due to the planned development of the site. The first stage, in 2015, consisted of prospective research including metal detection and trial trenches carried out by the archaeological company De Logi en Hoorne bvba. A year later, the final excavations were conducted by ADC ArcheoProjecten, over an area of c. 2.2 ha. The results of the latter have just been published in an excavation report edited by the first author (Hazen, 2018). The second writer from ArcheoMedia and BAAC Bouwhistorie en Archeologie respectively analysed the flint and prehistoric pottery recovered from the site. He also helped with the analysis of the Late Neolithic structures, as well as co-writing the conclusions for the Neolithic period as a whole.

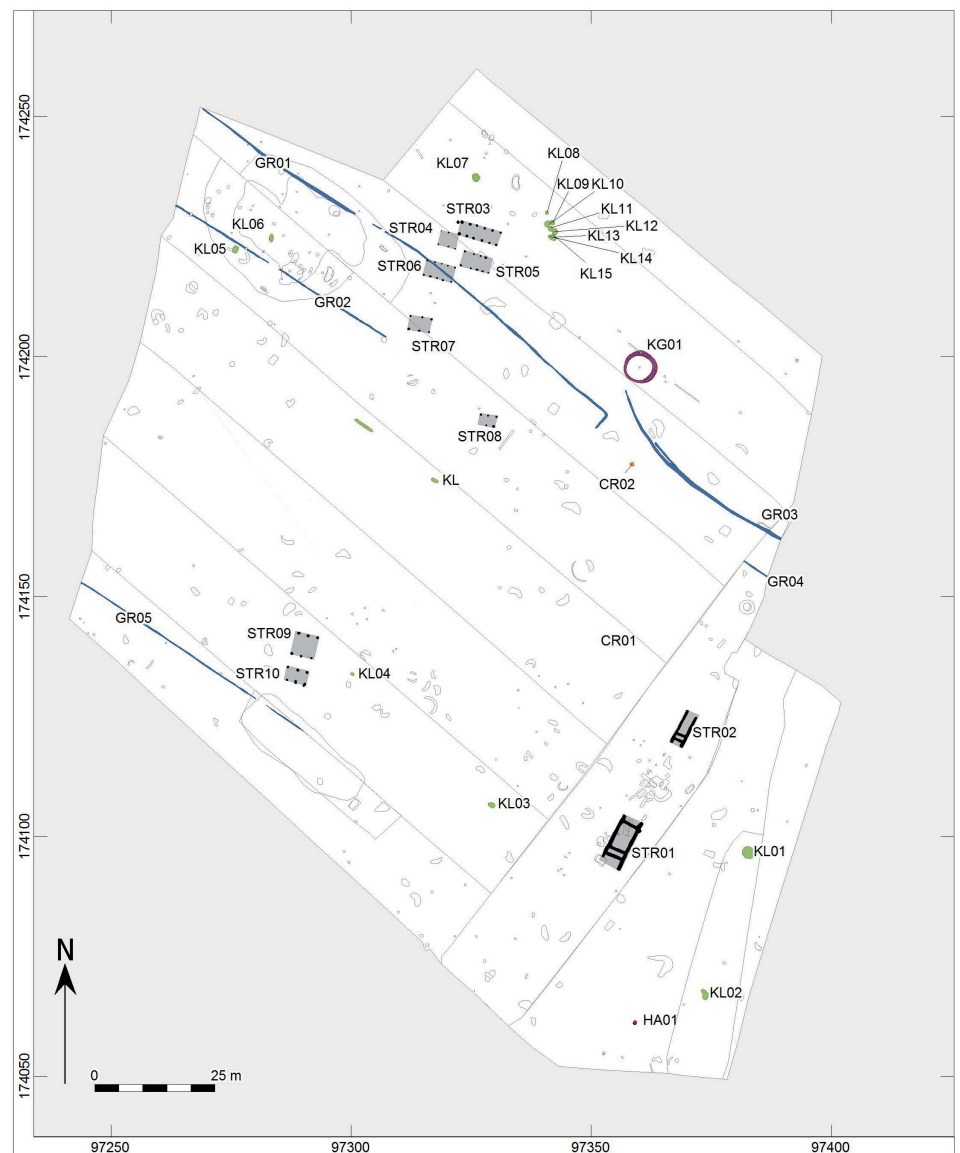
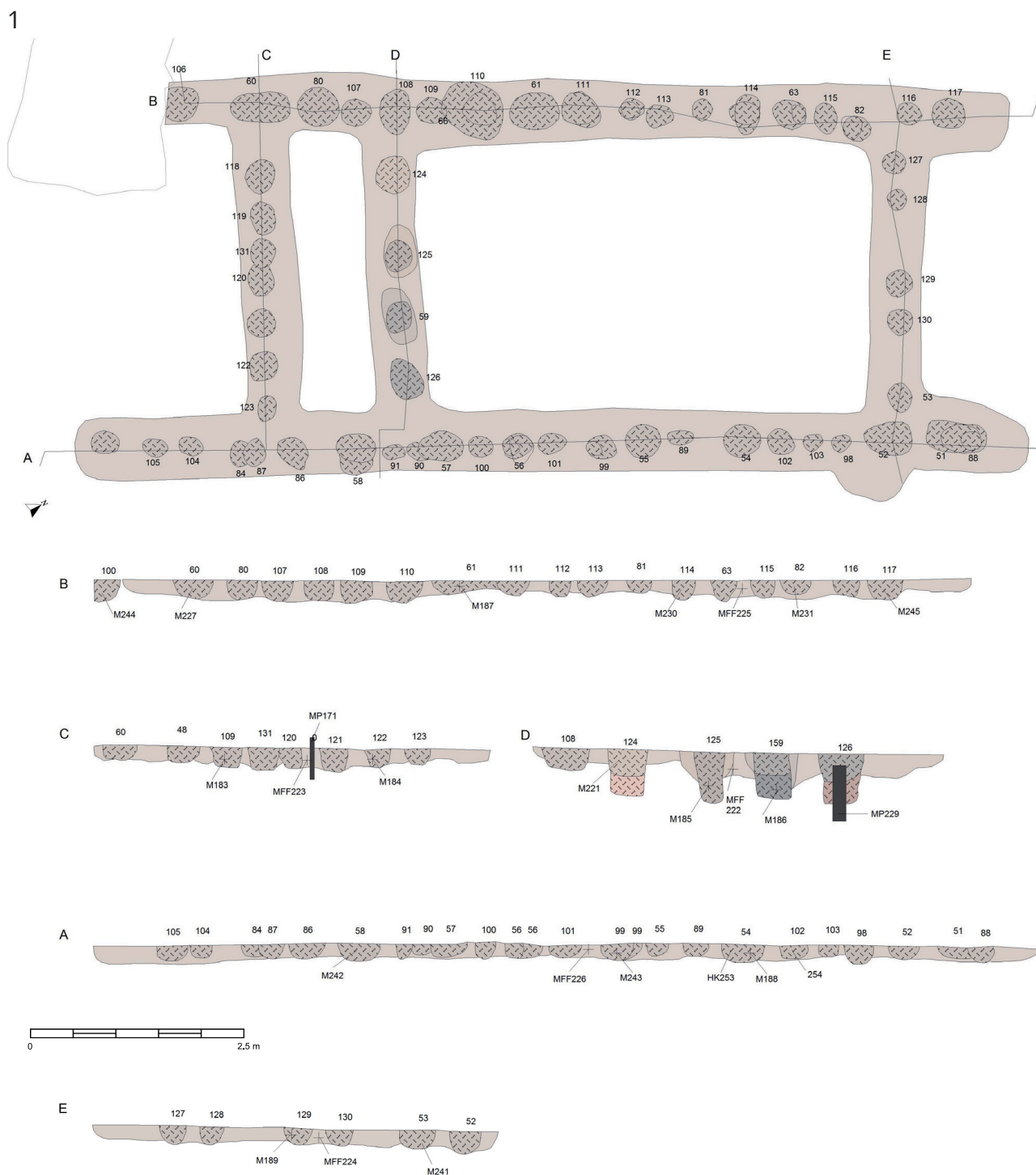


Fig. 1 – Excavation plan of the Eine-Heurnestraat site with in the easternmost part the two Late Neolithic structures. From Hazen 2018.

The site was located relatively high, lying nearby, at c. 500 m, the river Scheldt. Immediately south of the excavated area, the terrain was slanting towards this river. According to physical geographical investigations the archaeological features were, however, not encountered in alluvial sediments, but in outcropping loamy aeolian deposits. This substrate is devoid of lime, as demonstrated by hydrochloric acid tests, which explains why no finds of unburnt material were made. The archaeological remains found date from the Neolithic, the Bronze Age, the Iron Age, the Roman period and medieval and post-medieval times. One of the most intriguing finds is a Late Neolithic bell beaker containing fragments of amber including beads; this beaker and its content date somewhere between c. 2400-1900 BC. This paper will however concentrate on the (possible) Neolithic features dating to the first half of the third millennium BC that have come to light at Eine-Heurnestraat. They include the plans of two buildings, probably houses. They are a very welcome discovery, since the end of the Neolithic in Belgium is in many respects still a *terra incognita*.



2. The two Late Neolithic structures

The most notable discoveries during the Eine-Heurnestraat excavations are two Late Neolithic structures found close to each other (< 20 m) in the easternmost part of the investigated area (Fig. 1). In plan, they measure 11.1 by 4.75 m (structure 1) and 7.6 x 2.65/2.95 m (structure 2), respectively. The two possible house plans are strikingly similar to each other (Fig. 2). They are not only similarly oriented, i.e. c. NE-SW, but also have a rectangular lay-out consisting of two long ditches connected by transverse ones. Another characteristic shared are the antenna-like extensions of the trenches at the narrow ends of the structures. Judging from the soil profile, the original depth of these ditches must have been approximately 0.6 m. The identification of post-holes within the foundation ditches suggest that the two structures were not dismantled at the end of their use.

In most cases the wooden component of both buildings appears to have consisted of round wooden posts. There is one clear exception to this rule. The oblong shape of feature 21 in structure 2 hints at a rectangular plank.

The intersection of several post-holes suggests that both structure 1 and 2 had been repaired. The location of the entrance to the buildings is a point of discussion. In structure 1, access might have been gained via the northern short end, as the post-holes in the northernmost transverse ditch were widely interspaced. However due to the presence of a tree fall at this location it is not possible to be 100 % sure about this.

During the fieldwork the question was raised by Prof. Dr Ph. Crombé (Ghent University), who oversaw the excavations, whether the plans may have originally been parts of one larger structure. Micromorphological research does not, however, point in this direction, since no signals of significant erosion were found for the zone between the two structures. The features were furthermore macroscopically clearly discernible and demarcated, and no features have come to light in the extension of the structures' long ditches. Suggestive though not definite evidence – the walls may have been curved – is also provided by their orientation. The ditches do not form a straight line, or, to put it differently, the structures were not lying exactly in line with each other.

To unravel the function that the structures had, phosphate analysis was carried out by means of the ammonium molybdate method.

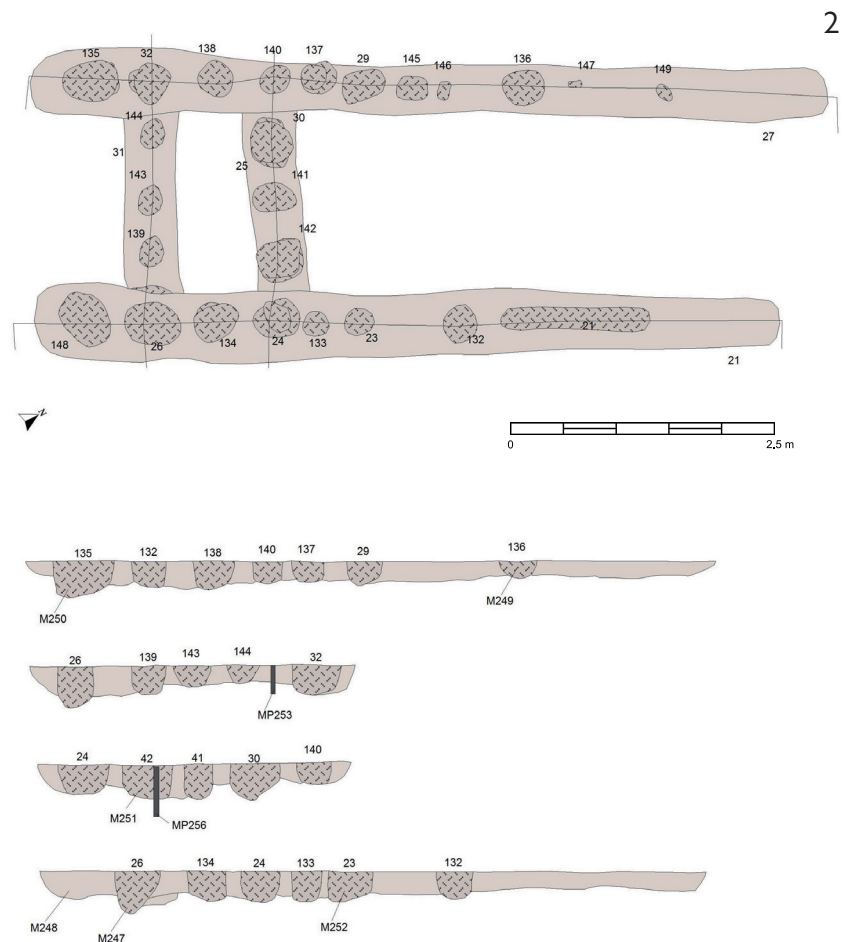


Fig. 2 – The two Eine-Heurnestraat structures, seen from above and in cross-section. The differences in dimensions between the views from above and the cross-sections are due to the preservation of the structures. Below: structure 1, above: structure 2. From Hazen 2018.

Samples from the interior of both structure 1 and structure 2 were measured, in each instance five measurements. The phosphate values for the former structure range from 0.0316 to 0.0447 %, with an average of 0.0391 %. Similar results were obtained for structure 2. They vary from 0.034 to 0.0422 %, on average 0.0397 %. As a framework of reference the natural subsoil close to the structures was also analysed: 0,0397 %. The final conclusion is that there are no significant differences, and consequently a specific function of the two structures cannot be inferred.

The dating of both configurations, on the other hand, is well established thanks to a series of ^{14}C -dates (Tab. 1). Due to the absence of other kinds of datable material mostly charcoal recovered from the features was dated. These charcoal dates produce a fairly homogenous pattern, that is in keeping with the one on charred seed. The significantly older charcoal date may be an example of distortion caused by the old wood effect. The overall conclusion is that the Eine-Heurnestraat structures were built in the first half of the third millennium BC. This time span can in all probability be narrowed down to c. 2800-2600 BC. In other words, within the Neolithic period in Belgium, it probably concerns the *Néolithique récent* or rather the *Néolithique final* (see Cauwe et al., 2001; Toussaint, 2013). They are dated by Toussaint (2013: 49) to c. 3600-2900/2800 BC and c. 2900/2800-2200 BC, respectively. For convenience sake, these periods have been taken together here, and designated as Late Neolithic.

In addition, the ^{14}C -research does not exclude the possibility that the buildings under discussion were contemporary, though it should be emphasized that it is no definite proof thereof.

Due to the lack of knowledge on the Late Neolithic in Belgium, the cultural attribution is a point of issue, although the Deûle-Escaut Group (French: *groupe de Deûle-Escaut*; see in this connection e. g. Blanchet, 1984; Cauwe et al., 2001; Piningre, 1985) is a serious possibility.

Context	Dated material	Laboratory no.	^{14}C -date (BP)	2 σ -calibration (BC) with OxCal, v. 4.3.2
structure 1	charcoal	Poz-83522	4470 $\pm$ 40	3346-3022
		Poz-83523	4215 $\pm$ 35	2904-2841 2814-2678
	charred seeds of <i>Crataegus monogyna</i> / <i>laevigata</i> (1 x) and <i>Prunus spinosa</i> (1 x)	Poz-90926	4150 $\pm$ 35	2871-2801 2780-2580
	charcoal	Poz-83521	4125 $\pm$ 35	2904-2841 2814-2678
structure 2	charcoal	Poz-90927	4175 $\pm$ 35	2887-2833 2820-2659 2651-2634
		Poz-90928	4140 $\pm$ 35	2875-2619 2605-2601
		Poz-90920	4110 $\pm$ 40	2871-2800 2792-2789 2780-2572 2512-2505

Tab. 1 – ^{14}C -dates with respect to the Eine-Heurnestraat structures.

Blanchet (1984) situates the Deûle-Escaut Group in northern France and western Hainaut in Belgium. A wider geographical distribution is, however, more likely, judging from the sites Hertsberge-Papenvijvers 3 (Sergant, 2010; Sergant *et al.*, 2009) and Waardamme-Vijvers (Demeyre *et al.*, 2004, 2006), both located in western Flanders (Fig. 5). The discoveries at Eine-Heurnestraat might imply that (parts of) East Flanders should also be included, though this idea requires a polythetic definition of an archaeological culture. Microdenticates, which are said to frequently occur in this culture (e.g. Cauwe *et al.*, 2001: 83), are absent from the Eine-Heurnestraat site (see below), contrary to the Waardamme-Vijvers (Demeyre *et al.*, 2004: 171, figure 5; *Ibidem*, 2006: 187, tables 3 and 4).

Structures similar, but not identical, to the Eine-Heurnestraat structures can be found in the 'classical' Deûle-Escaut Group (Fig. 3). By ^{14}C -research and dendrochronology the latter are also dated to the first half of the third millennium BC (Demeyre *et al.*, 2006: 189-190, figure 4 and table 4; Joseph *et al.*, 2011: 265, 267-268, figures 12-13 and table II; Praud *et al.*, 2007: 454-455, figures 8-9). The majority of these counterparts, all interpreted as house-plans, have been discovered in northwestern France (Joseph *et al.*, 2011). One example is known from Belgium, to be more precisely Waardamme-Vijvers in West Flanders (Demeyre *et al.*, 2004, 2006). The antenna-like projections and transverse trenches found

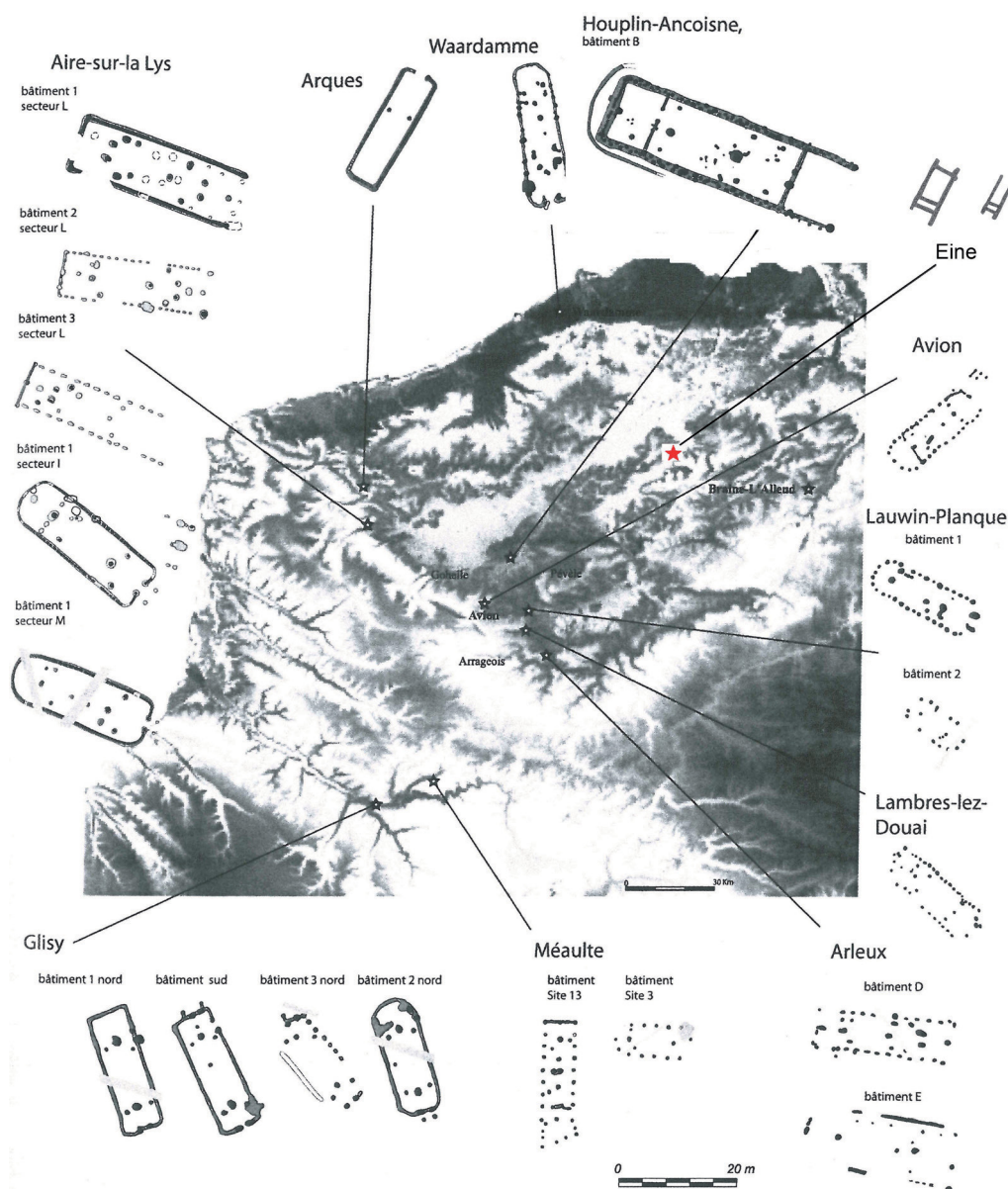


Fig. 3 – Overview of the (dwelling) structures of the Deûle-Escaut Group. After Joseph *et al.*, 2011, with as addition the Eine-Heurnestraat site (Eine), marked by a red asterisk.

in the two Eine-Heurnestraat plans are, however, practically without parallels. Building B at Houplin-Ancoisne displays both features, a house-plan from Avion shows a transverse ditch. Apparently the far majority of the Deûle-Escaut Group houses were not equipped with a porch, while the posts subdividing the interior of buildings were usually not erected in foundation trenches.

The dimensions of the house-plans, vary widely, as Figures 4 and 5 show. These differences warrant the distinction of several size groups. The two plans from Eine-Heurnestraat area are with dimensions of 11.1 by 4.75 m and 7.6 × 2.65/2.95 m among the smallest ones. This group of small buildings is denoted as D in Figure 4 and also includes building 2 from Lauwin-Planque. A direct connection between the size of the Eine-Heurnestraat and their construction method may be surmised. The absence of any traces of internally placed posts, which contrasts markedly with the findings for the other Deûle-Escaut Group plans, suggests that the posts in the foundation trenches sufficed to carry the above-ground structure.

3. Finds

The finds mainly consist of anorganic material: flint, non-flint stone and pottery. Not all of the material dates to the first half of the third millennium BC, such as the bell beaker

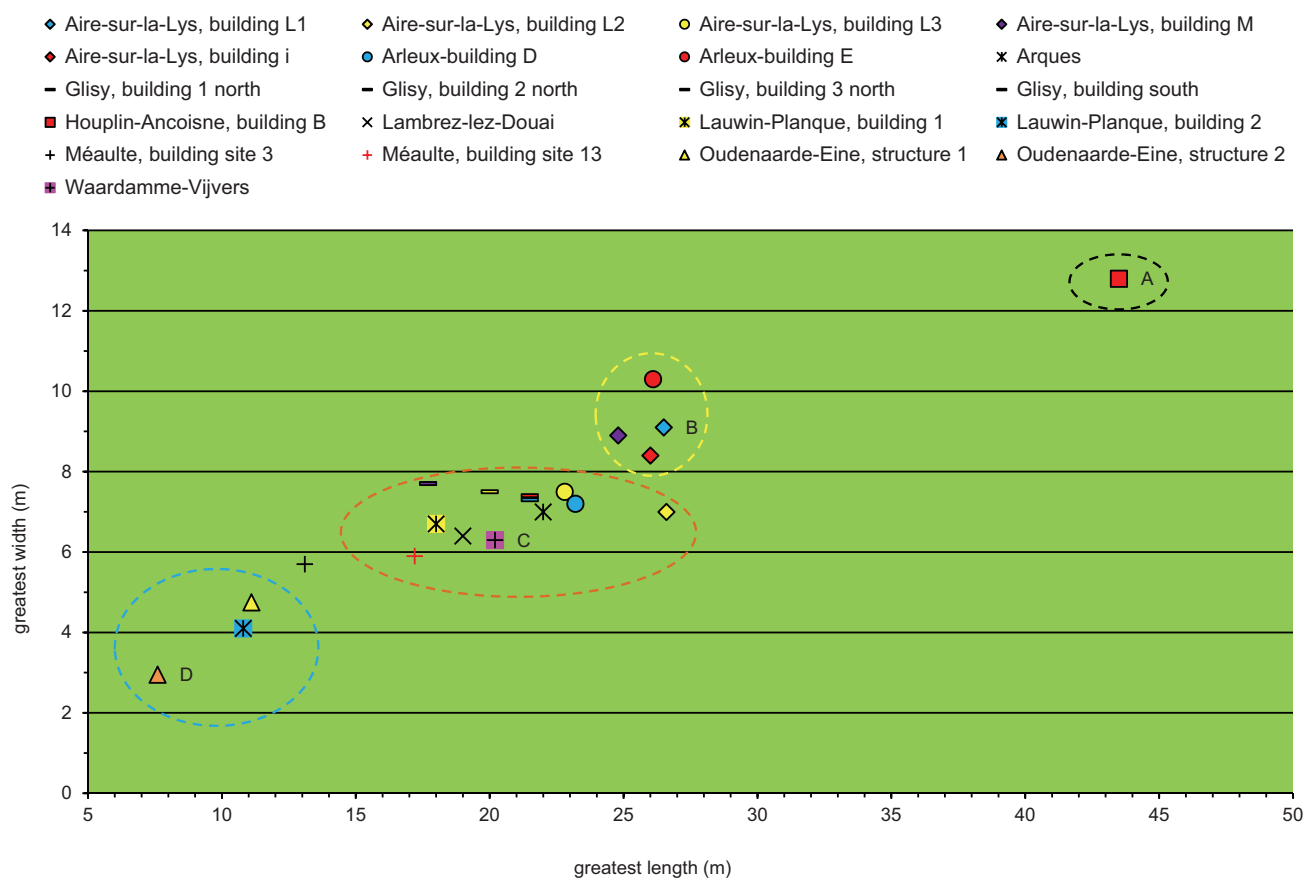


Fig. 4 – Greatest length and width of building plans (sometimes approximately). Four size groups have been distinguished. Raw data after Joseph *et al.*, 2011 and the present paper.

containing fragments of amber mentioned earlier in this paper. Typologically younger prehistoric pottery was also found, which along with several ^{14}C -dates suggesting a Bronze or Iron Age date. These ceramics include sherds from a cremation grave ^{14}C -dated to the Early Iron Age. Due to the severe fragmentation of the pottery morphological traits have practically not survived, thus hampering a chronological and cultural allocation. Fabric also offers little help with dating the finds. There is only one sherd that has been determined as Deûle-Escaut Group, and this date is by no means definitive. Apart from grog this sherd is tempered with flint.

The flint assemblage is dominated by flakes and tools. They are indicative of a Neolithic or younger age. Amongst the artefacts is a flake struck off a polished axe. The raw material can macroscopically be determined as flint of either the Rijckholt or Spiennes type, named after natural occurrences in the southern part of the Dutch province of Limburg and the Basin of Mons in southern Belgium, respectively. With the naked eye they cannot be distinguished from one another, but a provenance from the southern district of Belgium is in this case the most likely. Eine-Heurnestraat lies closer to Spiennes and the production of flint axes there during Neolithic times is well-known. Three more flakes from ground/polished axes were excavated. Two of them are in grey Hesbaye flint. Lastly, the discovery of a *Flint-Ovalbeil*, a term dubbed for axes in flint with an oval cross-section, should be mentioned. It concerns an originally longer specimen with some traces of reworking after its fracture. Unfortunately the type of raw material and its origin could not be established.

One of the *silices* collected during the prospective investigation is a barbed and tanged arrowhead. This artefact is probably part of the material legacy of the Deûle-Escaut Group. The same holds true for a dentated flake, though it is not a microdenticulate. The latter artefacts are considered, as already mentioned, typical for the archaeological culture in question.

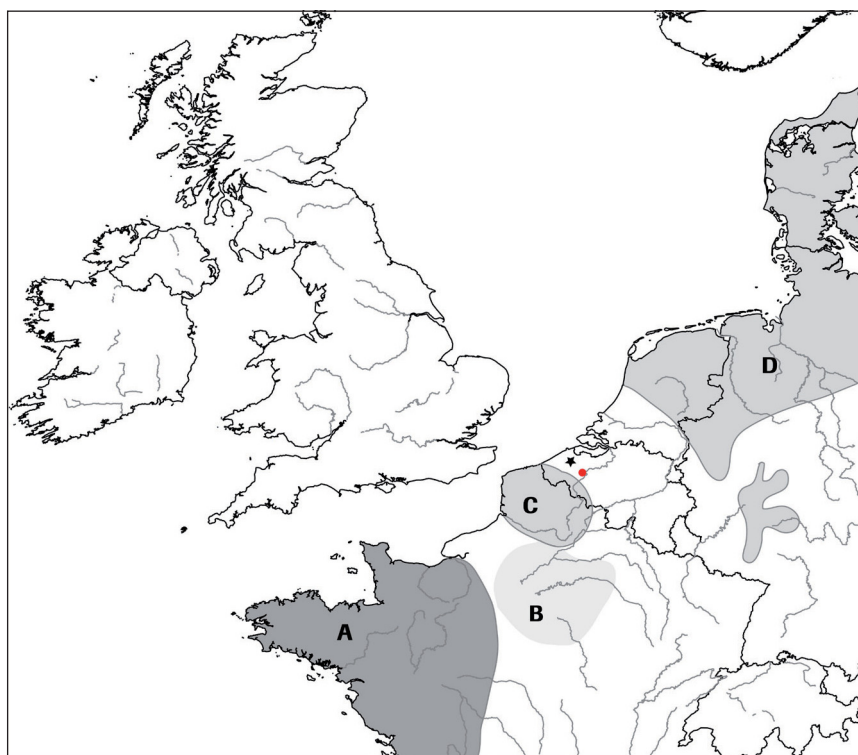


Fig. 5 – Distribution of the various archaeological cultures across the northwestern section of continental Europe in approx. the first half of the third millennium BC according to Demeyre et al. (2006). A = Artenacien, B = Groupe du Gord, C = Deûle-Escaut Group and D = Single Grave Culture. The asterisk refers to the Waardamme-Vijvers site, whereas the dot symbolises the Eine-Heurnestraat.

4. Final remarks

Assuming that the structures at Eine-Heurnestraat were houses, with a floor area of 6-10 m² as living space per individual, the structures were inhabited by 2-4 persons and 5-8 person respectively (see in this connection Brown, 1987; Naroll, 1962). That means that these homes probably housed one and two nuclear families, respectively.

Acknowledgments

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Abstract

This paper discusses a site that was recently excavated at Eine-Heurnestraat (mun. of Oudenaarde) in the province of East Flanders, Belgium. The excavation of this site, which is named Eine-Heurnestraat, produced vestiges from various periods: Neolithic, Bronze Age, Iron Age, Roman period, through to medieval and post-medieval times. The focus of this paper is on the Late Neolithic remains. Two rectangular structures measuring 11.1 by 4.75 m and 7.6 x 2.65/2.95 m, respectively were identified. Both had long as well as transverse ditches in which post-holes were identified. Typical are the antenna-like extensions of the long ditches at the short ends of the structures. ¹⁴C-analyses date the features to the first half of the third millennium BC. In both instances a date between c. 2800-2600 BC is the most likely. The structures can possibly be attributed to the Deûle-Escaut Group, an archaeological culture known from northern France and southern Belgium. The house-plans known for this archaeological group bear several resemblances, though no exact parallels can be given. Unfortunately, the finds recovered at Eine-Heurnestraat do not provide irrefutable proof to back up this theory. The assemblage is of modest size, and does not include artefacts which belong exclusively to the Deûle-Escaut Group.

Keywords: Eine-Heurnestraat, province of East Flanders (BE), Late Neolithic, 3rd millennium BC, Deûle-Escaut Group, house-plans.

Samenvatting

Kortgeleden is in de Belgische provincie Oost-Vlaanderen een site te Eine-Heurnestraat in de gemeente Oudenaarde opgegraven, waarbij resten uit het Neolithicum, de Bronstijd, de IJzertijd, de Romeinse tijd, de Middeleeuwen en de Nieuwe tijd zijn ontdekt. De huidige bijdrage richt zich op de laat-neolithische resten van deze vindplaats, die Eine-Heurnestraat is genoemd. Er zijn twee rechthoekige structuren van 11,1 x 4,75 m en 7,6 x 2,96/2,95 m opgegraven, beide bestaande uit lange en dwarsgreppels met paalsporen. Opmerkelijk zijn de antenne-achtige verlengingen van de lange greppels aan de kops kant van de structuren. Blijkens ¹⁴C-onderzoek dateren de twee plattegronden, vermoedelijk de resten van huizen, uit de eerste helft van het derde millennium v. Chr. Een datering tussen ca. 2800-2600 v. Chr. is het meest aannemelijk. Wellicht behoren de structuren tot de Deûle-Escaut-groep, een archeologische cultuur die vooral uit Noord-Frankrijk en Zuid-België bekend is. Helaas geeft de materiële cultuur die te Eine-Heurnestraat is aangetroffen in dezen geen uitsluit. De assemblage heeft een bescheiden omvang en bevat geen eenduidige artefacten van de Deûle-Escaut-groep.

Sleutelwoorden: Eine-Heurnestraat, provincie Oost-Vlaanderen (BE), 3e millennium v. Chr., Deûle-Escaut-groep; huisplattegronden.

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