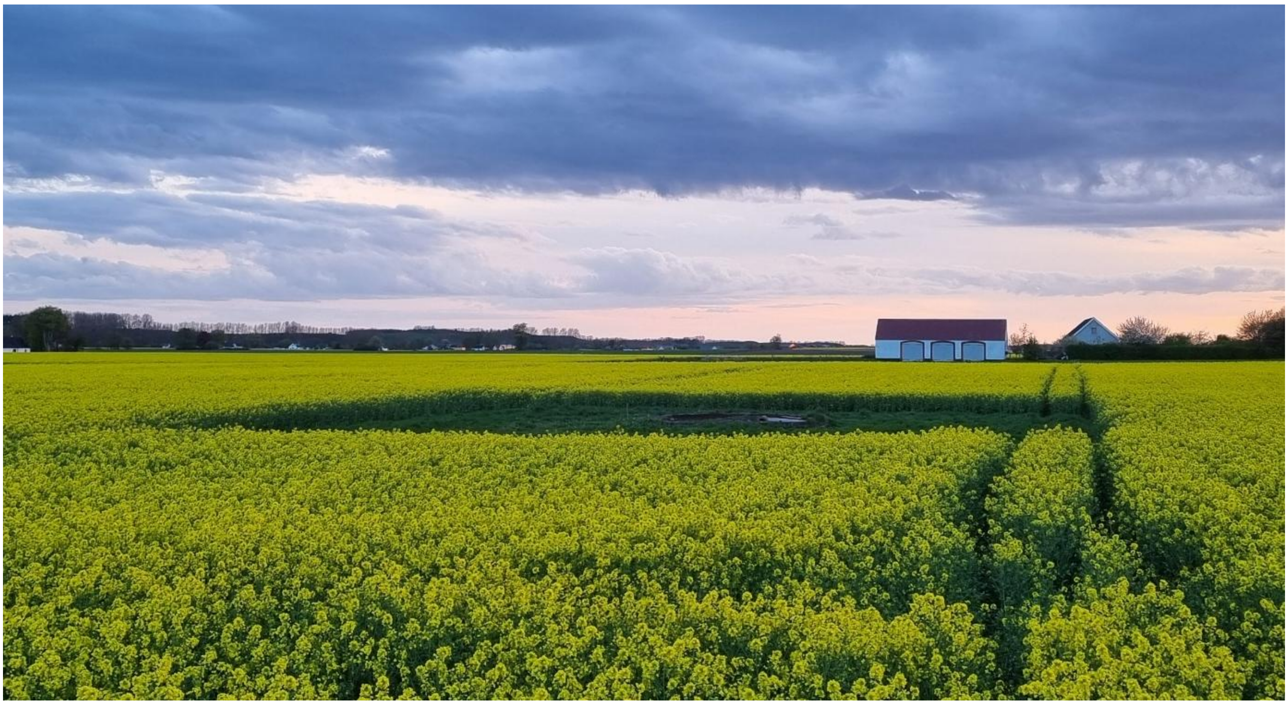

Röekillorna Spring from a taphonomic perspective

Taphonomic analysis of animal bones from the wetland environment of Röekillorna Spring (Löderup parish, Scania)

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Master's Thesis in Historical Osteology

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Abstract

Taphonomy is the study of how different processes have affected the osteological material, from the death of the animal and forward. The purpose of the analysis is to study how taphonomic processes and fluvial activity affect the preservation of osteological material in a wetland environment, by examining the zooarchaeological material from Röekillorna Spring (Löderup parish, Scania). A quantitative analysis method was used based on the frequency of processes affecting the bones. The most prominent taphonomic markers visible on the bones are anthropogenic factors and abrasions, whereas the least present processes are gnaw marks and recent damage. The preservation of the osteological material varies at the site; best-preserved bones are observed in the spring area and the outflow of the spring. Layers of peat and peat mud provide the best preservation conditions and majority of the bones are found in these layers. Several squares were not analysed; therefore, further studies might provide more insight into the preservation at Röekillorna Spring.

Keywords: *Taphonomic processes, Wetland environments, Röekillorna Spring, Zooarchaeology, Osteological material, Preservation, Fluvial activity, Abrasions, Pre-depositional processes, Anthropogenic processes, Natural processes, Weathering, Fragmentation.*

The author made all diagrams, tables, and figures in the thesis.
The image on the title page was taken by Linnea Broman 2025 as well as the images on the bones.
The images of the bones were approved to be used in this thesis.

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1. Introduction

Wetland environments have in the past been highlighted for their well-preserved osteological material and optimal preservation conditions (Boessneck, Driesch-Karpf & Gejvall 1968: 1-15; Larsson 1981: 161-168; Noe-Nygaard 1985). However, an increased degradation of osteological material has been observed over the past years at sites all over the world, compared to material found in the 20th century. Different taphonomic factors affect the preservation of osteological material in wetland environments, influencing interpretations made at a site and the possibility of finding bones, teeth, and horns during excavations. Fluvial activity affects both the layer sequencing by moving sediment around, and the placement and preservation of the bones. Analysing how different taphonomic processes affect osteological material from a wetland environment and the preservation conditions at a site, could provide valuable knowledge about where bones are best preserved.

Wetland sites such as Star Carr, Ageröd, Åmose, and Skedemosse, were during early excavations lifted for their well-preserved osteological material, which have aided in the understanding of specific periods in our prehistory. However, climate changes, acidity, and other processes have negatively impacted the preservation of osteological material in wetlands, making the bones degrade and disappear at an increasing rate. Excavations made during the late 1970s at Ageröd, displayed a decline in preservation of the osteological material (Larsson 1978), though further analyses specifically examining the preservation were not made until 2019 (Boethius *et al.* 2020a). At Star Carr deterioration of the osteological material was observed during excavations in the 20th century (Milner *et al.* 2011). Both sites showed an increased acidity (low pH) in the bog, which resulted in rapid degradation of the bones (Larsson 1978; Milner *et al.* 2011; Boethius *et al.* 2020a). Varying degrees of preservation have been seen over the years, and some conditions have been favorable for the *in-situ* preservation of bones. Preservation of osteological material have in many cases worsened, which makes the bones degrade *in situ* to a greater extent than before. Geochemical changes in the surrounding environment have affected the preservation possibilities, for example, acidic rain and eutrophication in bogs lead to rapid degradation of the osteological material (O'Connor 2004: 23-24 & 43). It would be beneficial to gain knowledge of how the preservation degree affects a site in different parts of it, if osteological material are better preserved in some parts than others.

Röekillorna spring is a multi-period spring site, used from Early Neolithic (around 4000 - 3300 B.C) until Roman Iron Age (around 50 B.C - 400 A.D), and it has been interpreted as an offering spring due to the presence and distribution of both human and animal bones. The spring is situated in Hagestad No. 41, Löderup parish (Scania, Sweden), located about 10 km from the Baltic Sea. At the site, the subsoil consists of clay till with an alkaline subsoil. A distinct reddish colouration is visible, due to high Iron (Fe) levels in the water. The spring had formed a depression where the outflow was located, which expanded further away from the spring. The water has been described as running water, which has led to several attempts to drain the spring. These attempts never fully succeeded and larger parts of the area are currently being cultivated (Stjernquist 1997; Nilsson 2009: 97; Møhl 1997). Nowadays, the spring area is visible by a square of grass/sedge surrounding the well (*picture on the title page*), in the middle of cultivated fields.

In 1951, during the construction of a fire well at Röekillorna Spring, the first findings of osteological and archaeological material (LUHM 29841) were discovered when soil and vegetation was removed from the center of the well. Osteological and archaeological material were lifted upwards through the layers, due to pressure from the waters of the spring. Bones from animals (incl. humans) were found to be very well preserved and were determined by Herved Berlin (Zoological Museum, Lund University). Further excavations were made during 1961-1962 (LUHM 31433) by Berta Stjernquist for Lund's University Historical Museum. During the excavation, many drainage pipes and infilled ditches were documented at the site (Stjernquist 1997; Møhl 1997). Around 472m² was excavated, whereupon stone, flint, pottery, iron, wood, and objects made of bone, as well as osteological remains, were found within the spring and scattered around it (Stjernquist 1997; Møhl 1997). Ulrik Møhl analysed around 6000 bones fragments found during 1972-1980 and made the assessment that 4070 of them could be registered on a species level. Møhl also reassessed the bones excavated in 1951 (Møhl 1997).

Geological investigations were carried out by Tage Nilsson, Björn Berglund, and Ingeborg Roth. The investigations indicated that during the Stone Age, the depression around the spring was both dry and open. However, in the Late Bronze Age to Iron Age the spring water flooded, spreading to a larger area around the spring which made the layer sequencing unreliable. Drainage pipes and ditches have been placed and made in modern times to drain the spring, which have disturbed and divided the layers. Ploughing of the cultivated areas have also affected the stratigraphy at the site (Stjernquist 1997; Nilsson 1997; Møhl 1997).

In this thesis, the osteological material from Röekillorna (Löderup parish) were analysed to gain knowledge of how taphonomic processes affect the preservation of bones in wetland environments. The site was divided into six zones, four were based on cardinal directions

(South, North, East, and West) and two were chosen based on the placement (Bottom and Outside). The osteological material was assessed based on taphonomic markers, fragmentation degree, and placement of the bones within the site and per zone, area, and layer.

1.1 Aim and questions

The purpose of this analysis was to study how taphonomic processes, geological factors, and fluvial activity in the Röekillorna spring had affected the preservation of the osteological material. Comparative analyses were made based on different environments and geological changes in relation to taphonomic markers and the preservation of osteological material. The hope was to provide further knowledge of the site and how taphonomic processes affect osteological material. The increasing degradation in peatlands raises questions of how wetlands affect the bones in springs with fluvial activity. Not all wetlands affects the bones negatively, and well-preserved bones have been found in different environments. This thesis aims to provide further insight into how different taphonomic processes and fluvial activity have impacted the preservation of osteological material in a wetland environment, and if there are any parts of the site or layers that provide better preservation conditions. The analysis will be made based on the following questions:

- ❖ Which taphonomic processes have affected the osteological material at Röekillorna?
- ❖ How have taphonomy, geological factors, and fluvial activity affected the preservation of the bones?
- ❖ Where have the bones been best preserved?

2. Background

Previous studies of wetland environments have shown that climate changes and other environmental changes have affected the preservation of osteological material.
Wetland environments consist of bodies of water, such as peatlands, riverine systems, and springs. Generally, wetlands change periodically, they can for example get flooded, parched, or drained (Aber, Pavri & Aber 2012: 58-71). Due to variations in chemical composition, hydrology, as well as other biological and physical attributes, the osteological material affects differently in various wetlands depending on circumstances (Aber, Pavri & Aber 2012: 58-71; Menotti 2015: 1-26 & 128-202; Boethius *et al.* 2020b). Within peatlands there are several subgroups of peat forming wetland environments, such as bogs and mires. Generally, bogs tend to provide conditions for preserving both organic material and inorganic material well. However, bogs with low pH value (acidic) will make the bones dissolve but other organic

materials such as plants will be preserved (Renfrew & Bahn 2016: 49-72). Other wetland environments are the springs that, due to geological and typological factors, occur in different forms and with different attributes. A natural flow of groundwater exists in springs that seeps up onto the land surface, where the flow in some springs can have higher energy making the flow of water more intense (Lyman 1994: 404-416; Knutsson 2014: 79-86). Riverine systems, rivers, and lakes are flowing bodies of water that travel through the landscape and are affected by environmental changes. Different processes affect the preservations of osteological material, for example pollution, natural and cultural processes, as well as chemical processes such as diagenesis, alkaline conditions, and humidity (Lyman 1994: 417-433; O'Connor 2004: 19-27; Broughton & Miller 2016: 169-179). In addition, the energy and flow of water also affects the preservation of osteological material (Subhasish 2014: 1-17). The movement of water can disarticulate bones, transporting them away from their original depositional place, and the sediment and other materials such as stones can get dragged across the bones and wear them down (Behrensmeyer 1982: 211-227; Yezzi-Woodley *et al.* 2018: 37-50).

2.1 Röekillorna spring

2.1.1 Geological and osteological background

Preservation conditions of osteological material at Röekillorna spring were affected by the layers varying due to fluvial activity and movement of sediments, being affected by the spring's outflow and floodings. A depression had been created by the outflow of the spring to the south and the floodings of the spring had created a brink at the edge of its reach. Some features were found together, and some bones had, with geological determination, been interpreted to an archaeological period (Stjernquist 1997). Through geological investigations, the depression around the spring was interpreted to have been open and dry during the Late Bronze Age. Flooding of the spring did not take place until the Iron Age. One could assume that the bottom layer should have belonged to the Stone Age. The stratigraphy was, however, uncertain due to the disturbance of the layers by fluvial activity. At places the terrain was uneven and "tussocky" leading to finds from different periods being found in the same depth and layer, even though they were chronologically determined to different periods. The depths were not to be trusted due to unevenness of the layer's depths (Stjernquist 1997: 39). North of Röekillorna spring, another spring existed that gave rise to a small brook, situated on a glacial shore bank. The area around Röekillorna had been called "Redspring meadows" in the past, indicating that the nowadays almost dry and drained farmland were once wet (Stjernquist 1997:19).

Due to the well preserved osteological and other organic materials, pH samples were taken. The pH values at x+2, y+11 were in the peat 6,00 and in the limy mud 6,40. At x+2, y+0 the pH were in the peat layer 6,25 and in the limy mud 6,75 (Stjernquist 1997: 52; Nilsson 1997) (figure 2). Another sample was taken in the waters of the spring, where the pH value was 7,7. The sample contained 3,3 mg/l chloride, 6,2 mg/l magnesium, and 14,6 mg/l calcium (Stjernquist 1997: 52).

2.2.2 Taphonomy in wetland environments

The preservation of organic material is significantly different in a wetland environment, compared to dry land, due to chemical and hydrological differences.

Bones found in fluvial channels and waters are often affected by abrasions, which affects the placement and the bones themselves. They are believed to be transported by fluvial movement, mixing the bones up and moving lighter bones further away. The bones can temporarily be stored in sediments, only to become subjected to fluvial activity again further abrading them (Behrensmeyer 1982: 213-214). Experiments and analyses have been made to determine how high fluvial activity can carry bones to new locations. Completely deposited bones indicate that fluvial activity transport the lighter bones further away compared to heavier and bigger bones. Rushing waters prove to transport the bones to greater length, however, high fluvial activity also buries the bones faster in the sediments. The latter leads to a better preservation degree of the bones due to lesser impact, from other taphonomic processes on the bones or resulting in more damage. Anthropogenic factors can disappear due to the fluvial activity by wearing and rounding the bones (Thorson & Guthrie 1983: 172-188; Aslan & Behrensmeyer 1996: 411-421; Hellawell & Orr 2012: 353-365; Evans 2015; Prassack 2011: 633-654; Yezzi-Woodley *et al.* 2018: 37-50; Dirrigl *et al.* 2020; Ismail-Mayer, Vach & Rentzel 2020: 944).

Analysis of bone transport in slow and high energy waters were made by Domínguez-Rodrigo *et al.* (2018), in the fluvial system of Guadarrama river (Madrid, Spain). They observed that in slow flowing waters, the intensity of the waterflow subsided with the distance from the spring, and both small and long specimens were moved. The weight of the bones was a prominent factor, and light bones got transported longer distances. In the faster flowing waters, lighter specimens were also transported longer distances. However, the overall weight and length of the bones did not seem to matter as much. It was instead their shape and/or structural composition that determined how long they were transported (Domínguez-Rodrigo *et al.* 2018: 1769–1789).

At Star Carr, a Mesolithic bog site in North Yorkshire (Northeastern England), well preserved bones were found both on dry land and in wetlands during excavations in 1949-1951. A few years later rapid deterioration of the osteological material was observed, leaving only a small percentage of the original material behind (Clark 1971: 1-3; Milner *et al.* 2011: 2819 & 2821). Some of the bones that survived appear to have been quickly buried within the sediment following the deposition. The immediate burial was believed to have shielded the bones from some destructive taphonomic processes, whilst bones that were not buried likely did get subject to a variety of taphonomic factors such as dog-gnawing and trampling. Rounding and smoothening of the bones were present on the material found within the waterlogged deposits, caused by flooding over the bones (Knight *et al.* 2018). Rounding could have been caused by sediments moving over exposed bones in dry areas, if they were left exposed for a while (Klein & Cruz-Uribe 1984). Bones have generally been better preserved in peat, if not acidic, compared to mud and sand layers (Anglert & Olsson 2003: 10).

At Ageröd a Mesolithic bog site in Munkarp parish (Sweden), well preserved osteological material were found during excavations in 1946, 1954, and 1972-1974 (Althin 1947; Larsson, Meiklejohn & Newell 1981). The stratigraphy at Ageröd A consisted, of layers with organic content and clayey mud, layers with less organic content, as well as mud and detritus mud layers rich in organic content. Layers of peat were followed by a mud layer, and an upper layer of peat. Most layers consisting of peat were acidic, leading to degradation and disappearance of osteological material. Conclusions were drawn that areas first drained for agricultural purposes belonging to the shallower parts were first to degrade. Pollution from agricultural fields could impact a wetland even though they were located some distance away (Hansson, Kjällquist & Boethius 2024: 1-13). The pH-levels affected the preservation of osteological material, were neutral to slightly alkaline conditions maintained a more stable pH-level. Acidic environments dissolved the inorganic content of bones, while alkaline conditions degraded the organic content. Lime and slaked lime could further increase the pH levels, accelerating the degradation of collagen. Less bioerosion was observed on bones buried in clay soils, due to mostly being humic and anaerobic. Low buffering capacity of the pH-values were destructive to the preservation of the bones (Williams et al 2024: 2 & 10). The pH-value normally fluctuate within the same layer sequence, with lower pH in the uppermost layers and higher in the deepest layers. In clayey bottom, an alkaline condition could sometimes be observed, whereas in swim turf the pH were neutral, and in the peat the conditions were acidic (Hallgren 2023: 22).

Skedemosse I is a fen on Öland, where a majority of the bones have been well preserved. The site was drained during the 19th century, which affected the southern parts of the spring. Most of the well-preserved bones were found in lime rich sediments, whereas bones and fragments tended to be decomposed when found in dry conditions. The majority of the bones that had a low degree of weathering were interpreted to be connected to the prehistoric lake, by becoming embedded into the sediments not laying exposed on the surface. Complete individuals found *in situ* at Skedemosse with gnaw and butchery marks present, were interpreted to have been butchered first and then left to the animals (Hagberg 1967a; Hagberg 1967b: 13; Lepiksaar 1967: 8, 13 & 109).

3. Theoretical perspective

In this thesis a taphonomic perspective is used to analyse osteological material based on the questions asked. A taphonomic perspective means that ante-, peri- and post-mortem processes affecting the bones are analysed to gain insight into the preservation and processes that have affected the presence of bones at the site. Many different factors can be vital to take into consideration when analysing different wetland environments. Among those factors are butchery- and gnaw marks, marrow splitting, abrasion, weathering, root etching, and the completeness of the bones. With this information, it is possible to reflect on past events and how they have affected osteological material.

3.1 Taphonomy

Taphonomy is the study of how natural and anthropogenic processes have affected the osteological material after the animal's death, before and after being deposited but also during excavation and forward (Noe-Nygaard 1977; Noe-Nygaard 1987: 7-52; Lyman 1994: 1; O'Connor 2004: 19-27). Taphonomic processes not only indicate the degree of preservation of the bones, but they also provide information about the events that have affected osteological material. Human actions such as butchery marks can be used to interpret the use of a site, for example, being a ritual or offering site where additional information about the animals' importance in the ritual can be analysed through taphonomic markers (O'Connor 2004: 21-27). Taphonomic process can be analysed to understand past societies, their interaction with the surroundings and with each other, being a complement to archaeological findings to gain further understanding of a site.

The chemical composition of bones is important for the preservation of osteological material, making them susceptible to geochemical changes affected by the surrounding environment. Bones go through different processes during the animals' life which stops after the animal passes. However, a lot of changes can still happen when the chemical compound of the bones reacts with the surroundings, changing the chemical composition of the bones. The hardness of the bone comes from calcium salts (mainly calcium phosphates) that are stored in the ground substance, which consists of organic compounds (mostly collagen) and the inorganic compound hydroxyapatite ($Ca_{10}(PO_4)_6(OH)_2$). After the death of the animal different ions can react with the mineral compound of the bones, both before and after they are deposited, exchanging the chemical structure but not necessarily the physical (O'Connor 2004: 5-7). These changes affect which results can be gained through chemical analyses, how well the bones are preserved, and the possibility to analyse a site.

The preservation of organic material is significantly different in wetland environment, compared to dry land, due to chemical and hydrological differences. The deposition of sacrificed animals and usage of bones during rituals depends on their value and meaning. Gnaw marks and trampling can indicate that the bones were left on the ground, getting trampled and gnawed on (Magnell 2013: 118). Trampling made by animals (incl. humans), affects the bones and leaves visible marks, by fracturing and spatially moving them. Bones buried in loose sediments or above ground get displaced by trampling, pushing the bones down in the ground and in different directions. Fragmentation is more present on somewhat weathered bones, due to being easier to break, which affects the preservation degree of the bones (Lyman 1994: 377-380).

Root etching "are interpreted as the result of dissolution by acids associated with the growth and decay of roots" (Behrensmeyer 1978: 154), caused by roots growing in the immediate vicinity of the bones leaving marks on bones. The etching processes occur where water accumulation between roots and bones creates a favorable condition to grow in. The etched area could either be lighter, darker, or the same colouration as the bone itself. The precedence of root etching on osteological material is also connected to the sedimentary environment, either being favorable or not for the growth of roots (Lyman 1994: 376-377; Grauer 1995: 51-52; Aufderheide & Rodríguez-Martín 1998: 16). Anoxic waterlogged conditions are, even if they preserve organic remains well, susceptible to root etching. Different types of trees and vegetation can grow in still or slow mowing wetland environments. Wetlands with higher fluvial activity stop the growing of roots and make it harder for them to find perch. However, *flora* specified to wetland environments would be more adapted to that environment (Tjelldén 2015: 383-384).

An important geological process to take into consideration when analysing the osteological material is the degree of weathering on the bones. Weathering are complex processes being linked to the natural landscape, affected by anthropogenic and natural factors. The hydrology, agricultural influences, and the flow of groundwater affects the weathering of the bones (Goudie & Viles 2016: 71-72). Weathering can modify the surface of the bones. If osteological materials are exposed to sun, wind, rain, and erosive processes, modifications such as anthropogenic and tooth marks can get obscured by other effects that changes the outer surface of the bones (Nunnally 2018: 46). They also affect the degree of fragmentation of the bones, where worse weathering degree of the bones makes them easier to break.

Recent damage also influences the preservation and fragmentation of bones, caused by damage from the excavations, during the handling, and storage of the bones. Bones can accidentally be broken during the excavations, and they can also fall apart when removed from the soil due to being brittle and degraded (Cassman, Odegard & Powell 2007: 32-33). Roots can also break the bones by growing into them, splitting and breaking them from the inside.

By analysing taphonomic factors, information about the site`s effect on the bones, the use of the site, the treatment of different animals, the use of the animals, the possibilities for chemical analysis, and an overall deeper understanding of a site can be obtained. The taphonomic processes are in this analysis used to analyse how they affected the site, how anthropogenic factors have affected the bones and where the bones are best preserved.

4. Material

4.1 Osteological material

The osteological material analysed in this thesis came from Röekillorna spring, Hagestad No. 41 (Löderup parish, Scania), which were excavated during 1961-1962 (figure 1). This analysis was limited to the zooarchaeological material, chosen squares and areas which were made into zones (figure 2 & table 3).

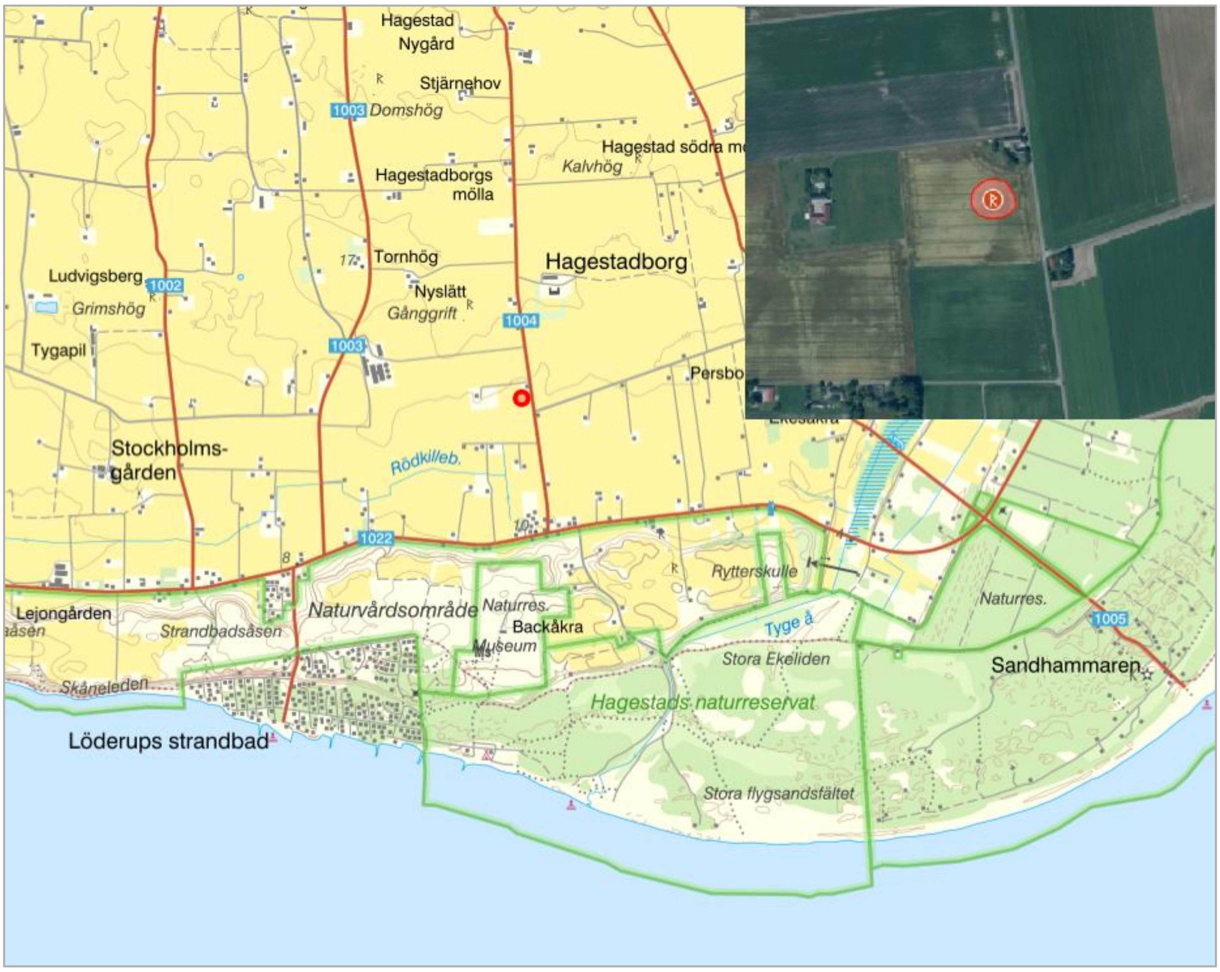


Figure 1: Map over the area around Röekillorna spring (Löderup parish, Scania), with the well centered in the red circle. Both maps were taken from minkarta Lantmäteriet 2025, the smaller one in the upper right corner are zoomed in closer to the spring and surrounding farmland. ©Lantmäteriet.

The osteological material analysed in this thesis consisted of 1 244 bones and bone fragments, which constituted about 21% of the 6 000 bones found during 1961-1962 excavations, and had a total weight of 19 697,9 g (ca. 19,7 kilo). 540 (43%) of the 1 244 bone fragments were assessed to species and 704 (57%) were unidentified (table 1). The osteological material assessed by species had a total weight of 15 476,2 g (ca. 15,5 kilo), while the unidentified bones had a total weight of 4 221,8 g (ca. 4,2 kilo) (table 1). All unidentified bones belonged to *Mammalia*; human bones were excluded from this analysis. Identifiable elements that could not be determined to species, were classed as unidentified. Most bones were found in the South and East zones, and slightly less were found in the North and West zones. Fewer bones were found in the Bottom- and Mixed zone; however, these zones did not contain as many squares (table 2).

Table 1: Determined spices and undetermined fragments present, quantity, and weight of the analysed osteological material.

Species	**Sum of quantity**	**Sum of weight (g)**
Bird (*Aves*)	4	4,8
Cattle (*Bos taurus*)	101	3527,6
Dog (*Canis familiaris*)	149	1637,1
Horse (*Equus caballus*)	158	7830,2
Hare (*Lepus sp.*)	1	0,7
Sheep (*Ovis aries*)	74	1457,8
Sheep/goat (*Ovis aries/Capra hircus*)	31	124,2
Seal (*Phocidae sp.*)	13	788,5
Boar/pig (*Sus sp.*)	8	104,6
Fox (*Vulpes vulpes*)	1	0,7
Unidentified	704	4221,8
Total sum	**1244**	**19 697,9**

Table 2: The sum of the complete osteological material divided per zone and weight (g) per zone.

Zone	**Sum of quantity**	**Sum of weight (g)**
N	243	1762,69
S	330	8313,69
E	354	3268,79
W	232	3852,04
B	39	670,59
H	46	1830,12
Total sum	**1244**	**19697,92**

4.2 Material used for analyses

Unpublished as well as published documentation, from the excavations during 1951 and 1961-1962, exists at LUHM's storehouse/magasine at Gastelyckan in Lund. The information can be found in the parish archive at Löderup SN (*Löderup socken 1951, Dfa: 283, LUHM 29841* and *LUHM 31433*), in the archive for maps (*Hagestad* and *Hagestad 41*), and as two card-indexes (*Hagestad 41. Nr 1^{1}-139^{744}*" and *Hagestad 41. Nr 140^{1} - 431^{10}*).

5. Method

In this study a quantitative analysis method was applied, based on the taphonomic markers on the chosen osteological material. The information obtained regarding the osteological material was recorded by physical assessments. Methods used to analyse the osteological material from Röekillorna were ocular and microscopic assessments, based on various taphonomic processes affecting the osteological material. Taphonomic processes recorded were abrasion, weathering, root etching, gnaw marks, butchery marks, marrow split bones, and trampling. Bones with butchering marks, trampling marks, and scraping from animals were further analysed under microscope to ascertain the nature of these marks. The distribution of the osteological material per zone, area, square, and layer were analysed. Registration of the osteological material and collection of connecting data such as depth and layer, and coordinates, were recorded in an Excel spreadsheet (appendix II).

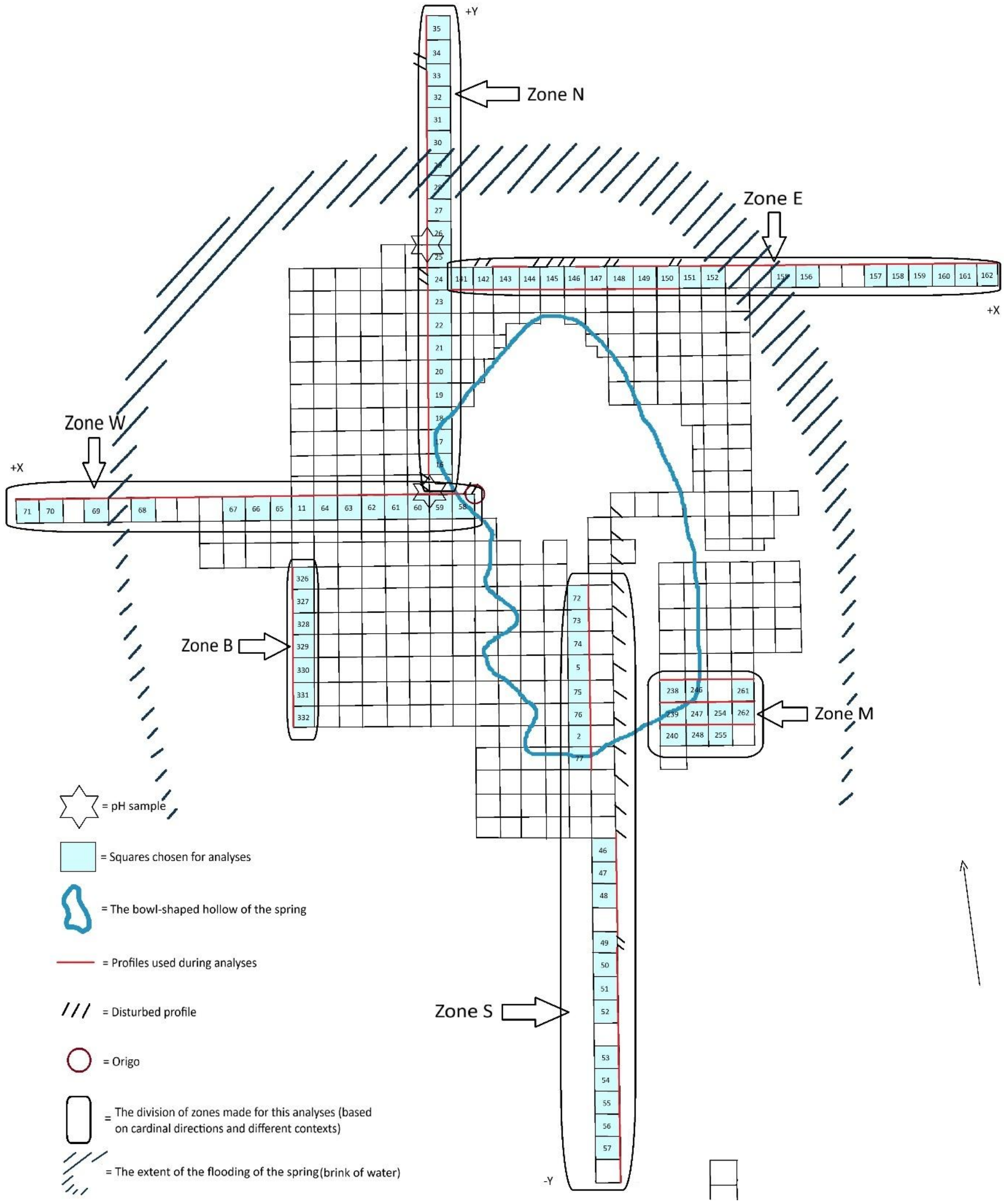


Figure 2: The profiles connected to the chosen zones at Röekillorna, based on a published drawing of the excavated squares (Stjernquist 1997) with Møhls (1997) numbers on the squares, and the profile drawing on millimeter paper. Made by Linnea Broman ©2025.

For this analysis, the site was divided into six zones based on both cardinal direction (North (N), South (S), East (E), West (W)) and specific contexts (Bottom (B) and Mixed (M)) (figure 2). The zones were based on profile drawings made on millimeter paper during the excavations (figure 3). The site was further divided into three different areas (hollow, flooded, and outside) based on their fluvial history at the site. The hollow area was during the Stone Age and the Bronze Age the spring itself (bowled-shaped hollow), and the flooded area encompassed the estimated flooded area during the Iron Age. The outside area contains squares that were located further away from the spring.

Additionally, a local coordinate system which was made during the excavations 1961-1962 and their division of sectors based on cardinal directions (Stjernquist 1997), were used to create the zones. Zone B and M were made based on the context and profile description of where the bones were found. The M stands for Mixed and contained bones from both the hollow and flooded areas, and B stands for Bottom and contained bones collected only from the bottom. In this analysis the coordinates were used to choose profiles and divide the site into zones, areas, and layers. A total of 92 out of 431 excavated squares were chosen for analysis. A total of 10 profile drawings were used to make the analyses and get information of the layers sequence per zone. In zone E and S two profiles were used to gain enough information on the layers and areas, due to missing information connected to one profile. In zone M, three profiles were used to incorporate a larger area (table 3) and one profile was used in zone B.

Table 3: Table over the zones made and their connection to profiles as well as squares per zone.

Zone	Profile/profiles	Squares
North (N)	1	20
South (S)	2	20
East (E)	2	20
West (W)	1	15
Bottom (B)	1	7
Mixed (M)	3	10
Sum	**10**	**92**

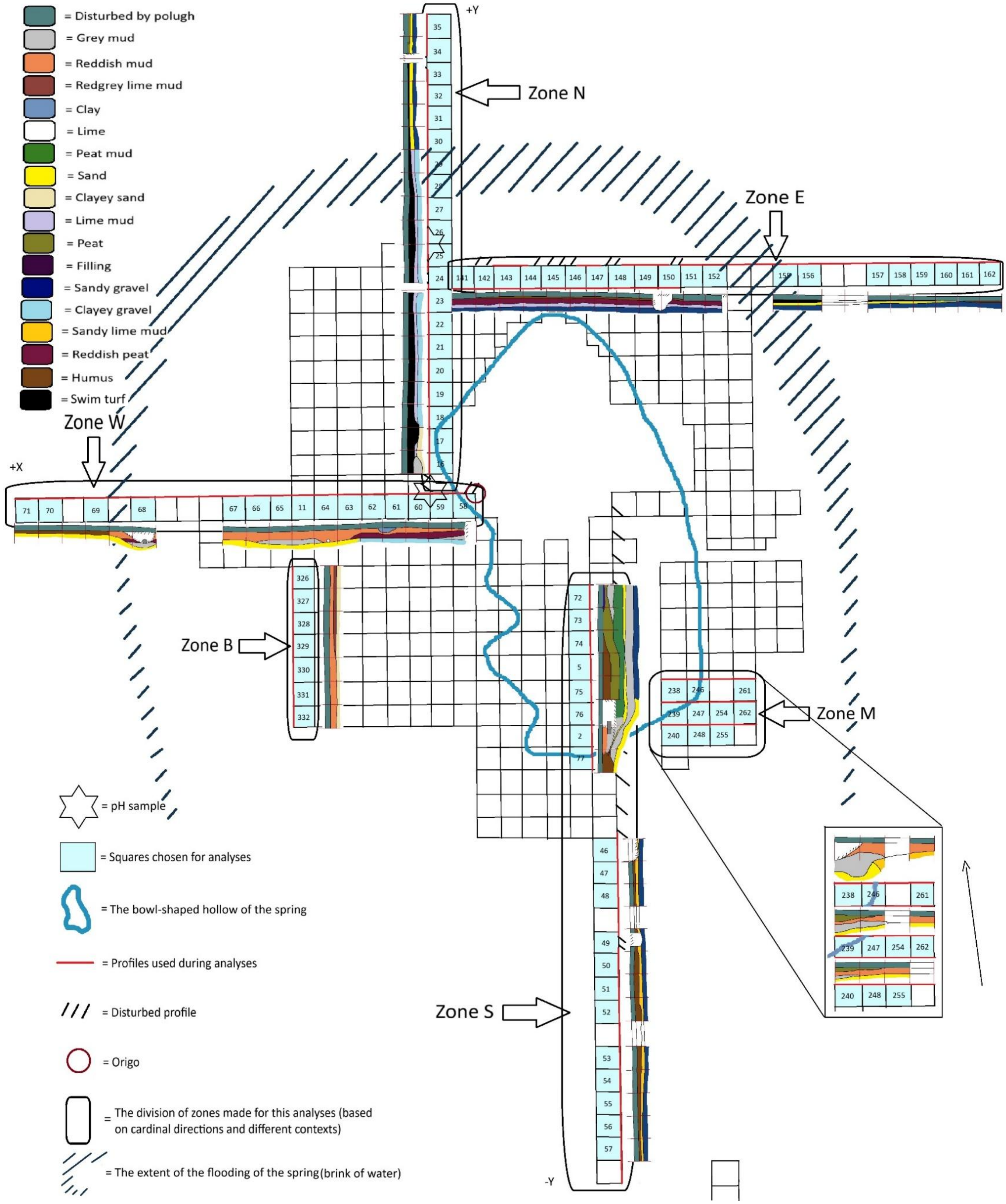


Figure 3: Distribution of the chosen zones and containing squares, marked by Møhls numbers. Additionally, the profiles used in the analysis are marked and each layer is illustrated. This drawing is based on a published drawing of the excavated squares (Stjernquist 1997) with Møhls (1997) numbers on the squares, and the coordinates of the profile drawing on millimeter paper. The profile drawings were based on the unpublished millimeter drawings. Made by Linnea Broman ©2025.

5.1 Approaches and delimitations

Delimitations were made by dividing the site into zones, with a concentration on the osteological material from animals (excluding human bones). The zones were narrowed down to squares $1m^2$ from the profile, which was based on the coordinates and the direction of the profile. Additionally, bones were left out from the analysis if they lacked information about both layer and depth on the boxes, card index, in Stjernquist (1997) book, and in unpublished material. That was also applied for the squares lacking bones and information of layer and depth. The depths were not used, except as an overall reference and complimentary information, because the same depth could have quite different stratigraphic layers, belonging to different periods. An unpublished card index made by Møhl were used as a complementary source of information about the layer and depth. The specific *Niv. Series* (level series) were chosen to be excluded due to no coordinates and therefore unclear connection to placement, layer and depth. These delimitations were made based on the analytic possibilities of the material and the research.

Analyses of the osteological material were made in reference to osteological compendiums to determine the species (Boessneck 1970; Eriksson, Iregren & Magnell 2002; Broughton & Miller 2016) as well as the reference collection at Lunds university reference lab. Bones that could be determined to element but not species, due to the fragmentation degree, were registered as unidentified. Unidentified bones were as important for the analyses as identified ones, because taphonomic factors have affected all the bones and, in many cases, the fragmented ones the most. A portable microscope (Dino-Lite Basic), with a 10x to 70x and 200x magnification as well as 640x480 pixels, was used during the analyses and registration of the osteological material to distinguish taphonomic markers on the osteological material. Differences between anthropogenic processes and other surface modifications such as gnaw marks or trampling were further analysed under microscope due to their similarities. Anthropogenic, peri-depositional, and natural surface modifications were studied according to Fernandez-Jalvo & Andrews (2016).

5.1.1 Quantification

NISP stands for Number of Identified Specimens (Lyman 2008: 27-29) and were used to indicate how much of the material that could be determined to species, and how many bones that were too fragmented to discern any clear morphological characteristics connected to a specific species. NSP (Number of Specimens), were used the most during the analyses, because it provides information on how many bones were present regardless of whether they could be identified or not.

5.1.2 Abrasions

Abrasion was used to analyse how fluvial activity affected the preservation of the bones, and if it affected the possibility to analyse other taphonomic markers on the bones such as butchery marks. Abrasion was categorized based on both rounding (smooth and rounded edges) and polishing (glossy surface, looking almost varnished) of the bones surface (figure 5). The polished surface on the bones reflected the light differently from well preserved hard bones when light hit it. Abrasion on the bones were identified and registered using Fernandez-Jalvo and Andrews (2016), and Reynard and Henshilwood (2018) as guides. Kept in mind was that varnishing could be present as a sealing method over the location and find numbers on the bones. Transparent glue could also have been used as a method to stabilize fragile bone elements or glue them together (figure 5).

Figure 5: Different taphonomic markers present on the bones. (A) Rounding and polishing. (B) Rounding, polishing, and tooth scoring. (C) Gnaw marks and root etching. (D) Root etching. (E) Scraping. (F) Marrow split. (G) Trampling. (H) Glued foramen and area around it, not polished. Photos taken by Linnea Broman ©2025.

5.1.3 Root etching

Root etching of bones was identified by the patterns and removal of hard surface on the bones, which were noted during registration (figure 5).

Roots leave marks on the bones by etching the surface, caused by exudation of weak acids might also affect the phosphate in bones. Root marks can provide valuable information about the surrounding environment, because the roots require favorable conditions, nutrients and humidity to grow (Reitz & Wing 2008: 141; Macho-Callejo *et al.* 2024: 2502).

5.1.4 Weathering

Weathering of the osteological material was analysed to determine the preservation degree of the bones, which had affected the bones either below or on the surface (figure 5).

Weathering is defined by both chemical and physical agents that affect both the inorganic and organic components of the bones, separating and destroying them (Behrensmeyer 1978: 151-153). Weathering of the osteological material were based on Boethius *et al.* (2020) weathering criteria of bones in the bog complex of Ageröd, due to the bones being from a wetland area and not from dryer environments. The stages were divided into four categories, with a fifth that were connected to acidic environments (Boethius *et al.* 2020a: 10-11).

5.1.5 Degree of fragmentation

5.1.5.1 Size and weight

The average weight of both identified and unidentified bones were used to get a better picture of the degree of fragmentation, and to analyse the preservation of the bones. In addition to this, the average size per fragment was also analysed.

The weight was recorded by using a scale (Mettler Toledo: PB3002 DeltaRange), measuring in grams with two decimals (Max 3100 g and Min 0,5 g; e=0,1 g and d=0,1 g/10 mg). The length of the fragments was measured (mm) by placing them on a yardstick and rounding the measurements up or down. Bones measuring between 1-2 mm above were rounded down and bones measuring between 3-4 mm were rounded upwards.

5.1.5.2 Anthropogenic, pre-dispositional and natural processes

5.1.5.2.1 Butchery marks

Butchery marks were divided into four different categories consisting of cut, chop, blow and scraping marks (figure 5). The literature used during the identification and registration of the visible markers on the bones are Domínguez-Rodrigo *et al.* (2009), Bertolini and Hohenstein (2016), and Reitz & Wing (1999). Defining for example cut marks by their V-shaped form compared to the U-shaped form caused by trampling could be hard to differentiate if the bones had been heavily affected by abrasion and other processes that affect the surface of the bones.

5.1.5.2.2 Gnaw marks

Gnaw marks on the osteological material were categorized as either gnaw or chew marks, scraping, scoring, pitting, and/or puncturing (figure 5). The literature used when analysing these marks were Lyman (1994), showing different types of gnaw marks on bones, and Bello and Parfitt (2023), who made comparisons of flintknapping and chew marks on bones.
They can for example be U-shaped, V-shaped, or O-shaped marks on the bones, and they differentiate between animals. Gnaw marks can be hard to discern if the bones are damaged or very worn, due to them often being rather shallow (O'Connor 2004: 47-51).

5.1.5.2.3 Morrow splitting

Marrow split bones were analysed to gain information about how the bones had been fragmented, where only the bones with indicative marks of the splitting act were noted as marrow split (figure 5). Abrasion and weathering can affect the possibility to discern if the bones are intentionally split or have been broken by natural causes.
For the identification of marrow split bones, classifications were made based on visible chop or blow marks, as well as clear intentional longitudinal breaking of the bones based on Lyman (1994: 322-323) and Stålberg (2025: 15-37).

5.1.5.2.4 Trampling

Trampling marks were analysed to get a wider perspective on which processes that had affected the preservation of the osteological material (figure 5).
Trampling marks have similar attributes as cut marks, though they tend to be more U-shaped and more shallow. The distribution patterns can aid in identifying trampling marks; however, bones can be trampled on until only small fragments remain which makes it hard to discern any attributes (O'Connor 2004: 45-47; Reitz & Wing 2008: 138-139). To analyse these patterns and shapes Reynard and Henshilwood (2018), as well as Behrensmeyer, Gordon and Yanagi (1986) work were used as reference. Images showing different trampling marks were referenced by Olsen and Shipman (1988).

6. Results

In the osteological material from Röekillorna Spring, taphonomic processes such as abrasions, weathering, trampling, gnaw marks, butchery marks, marrow splitting, root etching, and recent damage were observed. Taphonomic processes had affected the osteological material from the chosen zones, the scope of both natural (root etching), peri-depositional (gnaw marks, and trampling), and anthropogenic factors (butchery marks and marrow split bones) were visualized to see the distribution of affected bones. Recent damage to the bones was also accounted for, some of the recent damage being roots breaking the bones. The scope of natural, peri-depositional, and anthropogenic processes affecting the bones related to the zones, was visualized in a diagram (figure 4).

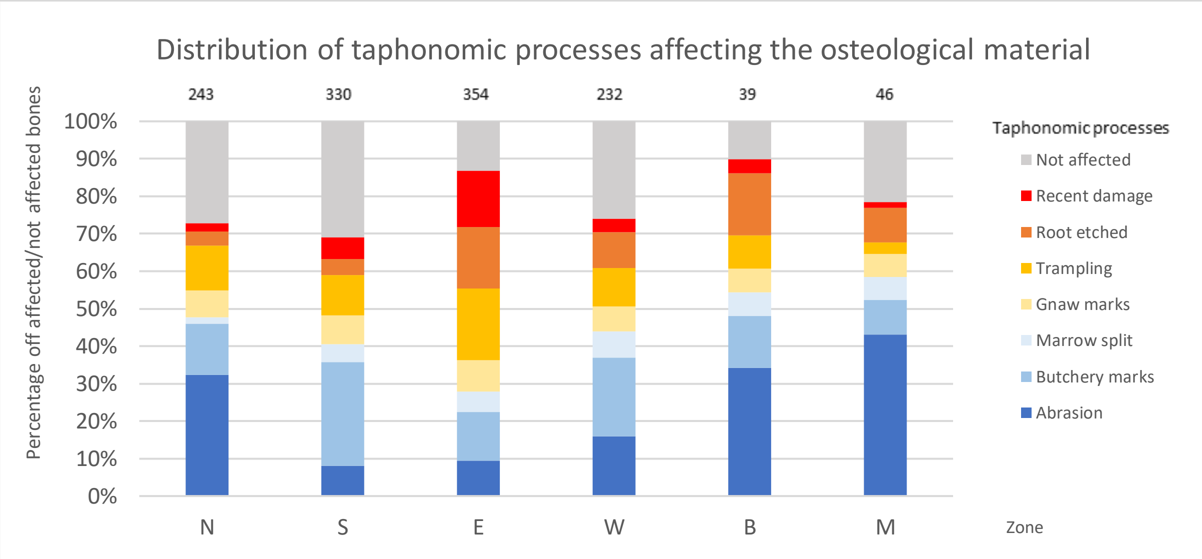


Figure 4: The distribution of bones affected and not affected by taphonomic processes. The result was based on all the assessed bones (NSP) from each zone. Relating table can be found in appendix I: table 5.

6.1 Degree of fragmentation

The degree of fragmentation visible in the material varied between the different zones. In zone N and B, the bones were smaller and most fragmented (figure 6 & appendix I: table 6). There were also many abrasions in these zones, which could influence the average weight of the bones (figure 9 & figure 6). The bones in the South zone belonged to many different species, not only cattle and horses, and were overall less fragmented. This was also observed in the East zone, and somewhat in the West (figure 7). Worth noting is that bones from the smaller species could be bigger and weigh less, whilst bones from horse and cattle could be very heavy, even if they were only fragments. Many of the more fragmented bones were unidentified, whereas bones from each species were more complete (figure 7). The degree of fragmentation was, however, affected by the average weight and measurements of each element per species, due to some bones being heavier and smaller. An overview of the different species degree of fragmentation (figure 7), and elements per species (appendix I, figure 20), were used as a reference point during the analysis of degree of fragmentation.

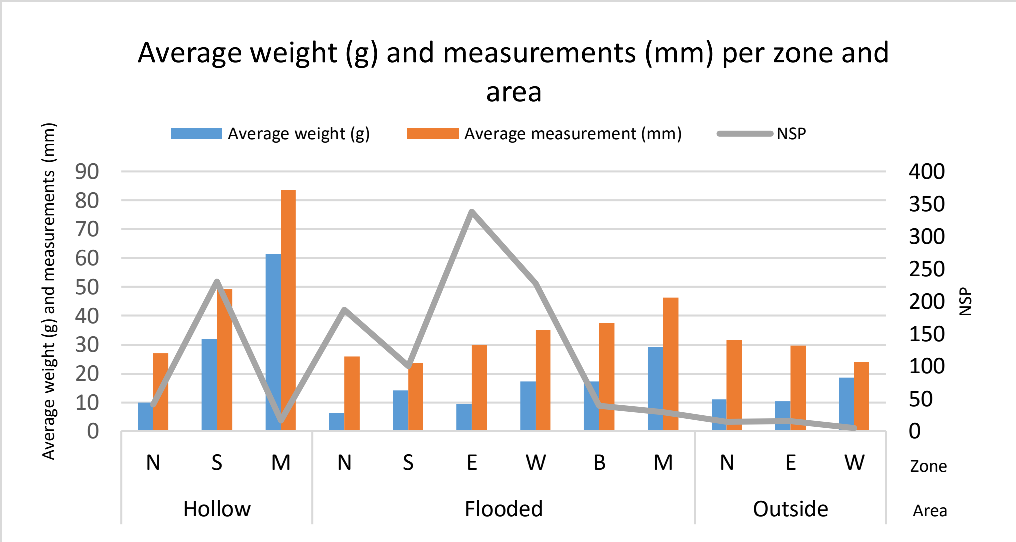


Figure 6: The degree of fragmentation per weight (g) and measurement (mm) on the left axle, in relation to the NSP on the right axle divided per area and zones. The hollow area located in the spring, the flooded area outside of the spring, and the outside area is furthest away from the spring (figure 2).

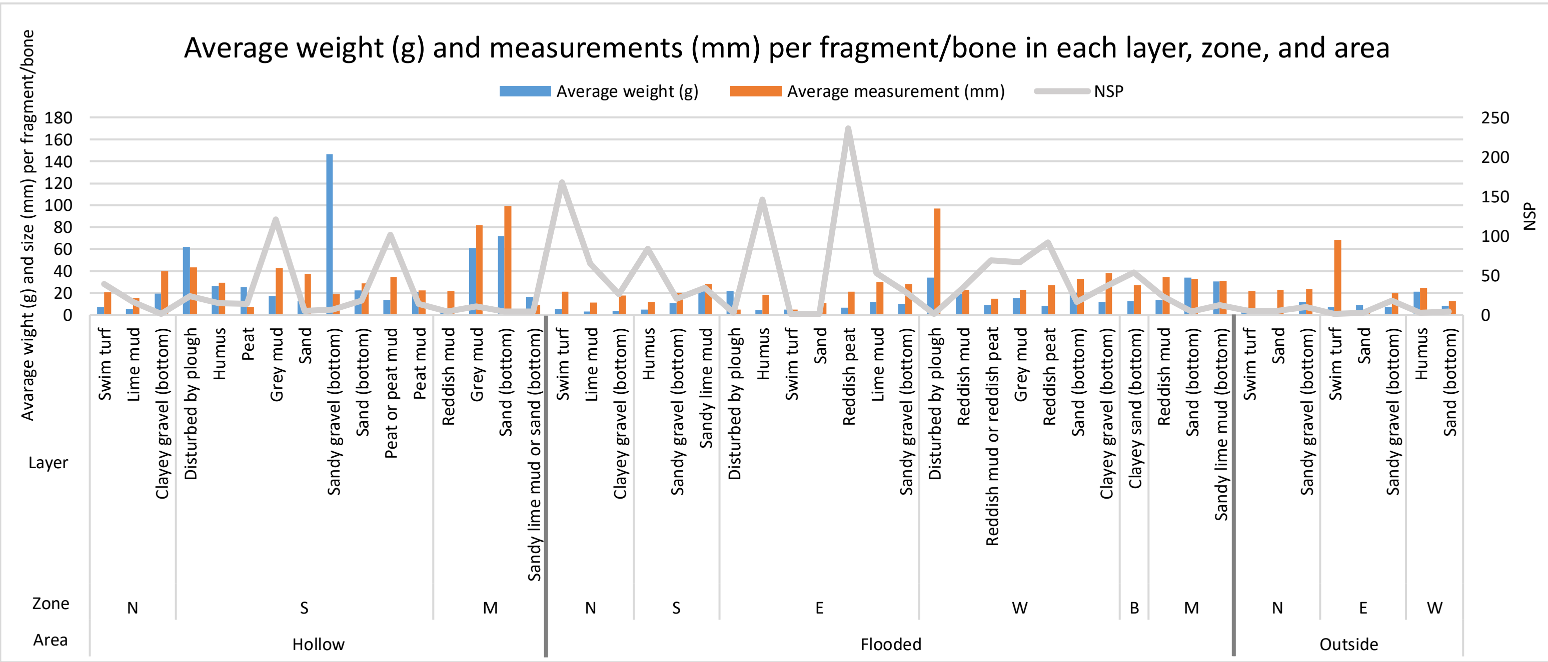


Figure 7: The degree of fragmentation of each species related to the zone they were found in, comparing the weight (g) and measurement (mm) on the left axle, in relation to the NSP on the right axle.

The distribution of both identified (figure 4 & appendix I: figure 20) and unidentified (appendix I: figure 21) bones, varied between the layers. Most of the species were found in the layers of swim turf, reddish peat, and grey mud. Many of the less fragmented bones belonged to the grey mud, and peat or peat mud layers. Overall bones found in mud or peat layers were not as fragmented, except from the bottom layers. The degree of fragmentation in swim turf was generally very bad (table 9). The bones were concentrated in different layers related to accumulations of different species. Many of the unidentified fragments were present in the reddish peat, humus layer, and swim turf (appendix I: table 7).

Table 4: The distribution of identified species per layer. The layers were generalized in depth and ordered from the upper layers descending to the deeper layers.

Layer	Bird	Cattle	Dog	Horse	Hare	Sheep	Sheep/goat	Seal	Pig/boar	NISP
Disturbed by plough		1		12					1	14
Humus		8	2	24		1	4		2	41
Reddish mud		7	4	7		4				22
Peat			1	4						5
Reddish mud or reddish peat		3	4	16		2				25
Swim turf		3	55	8	1	3	1		1	72
Reddish peat		8	17	38		4	2		1	70
Lime mud	1	9	20	5		2	1			38
Sand		2	1	2						5
Sandy lime mud		2	2	6						10
Sandy gravel (bottom)		13	2	4						19
Grey mud		8	7	21		49	18	7	2	112
Clayey gravel (bottom)		5	15			2	3			25
Sandy lime mud (bottom)	1	1	2	1		1				6
Clayey sand (bottom)	2	1	12	2		1	1	1		20
Peat or peat mud		22		1						23
Peat mud		2		3		1				6
Sandy lime mud or sand (bottom)			1			2				3
Sand (bottom)		6	4	4		2	1	5	1	23
NISP	**4**	**101**	**149**	**158**	**1**	**74**	**31**	**13**	**8**	**539**

Some of the layers were only present in one area whilst others were all encompassing. The South zone had layers that were not present in any of the other zones, differentiating itself from the rest (figure 8).

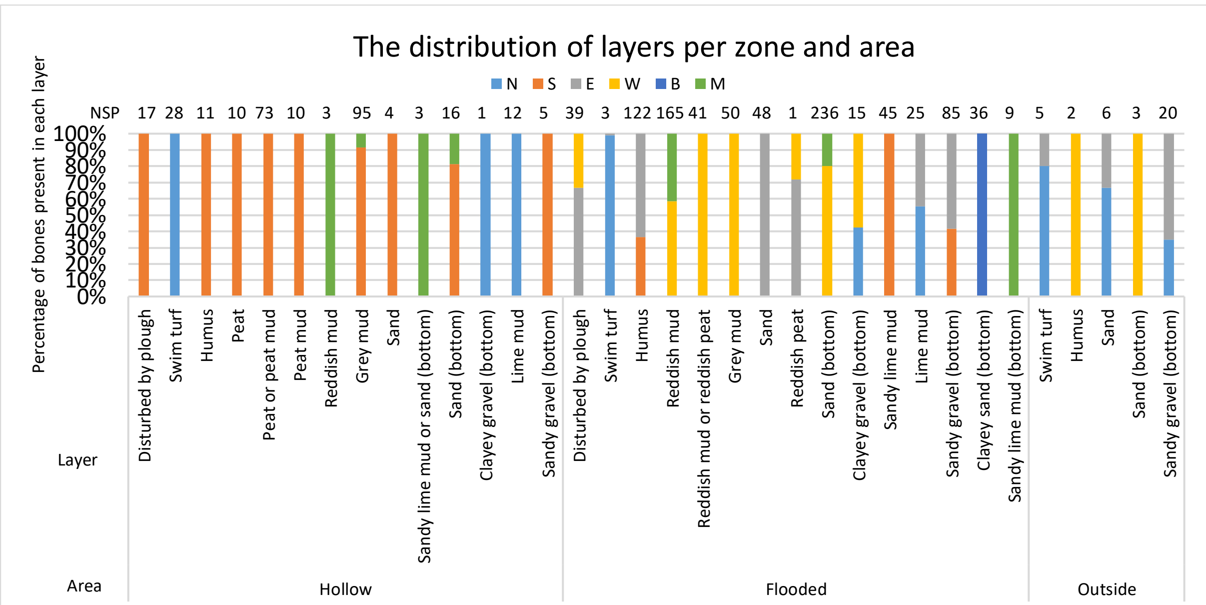


Figure 8: Distribution of bones found from each zone per layer and area. The layer sequence was based on the areas. Relating table can be found in appendix I: figure 9.

6.2 Abrasion

Abrasion affected the osteological material to different extents, which varied between the zones. The Mixed zone was most affected by abrasion, closely followed by the North zone, whereas the southern zone stood out as being least affected by abrasion. The East zone had fewer abrasions. In the North zone, the few bones present in the outside area were only affected by rounding and polishing, while both the hollow and the flooded area had been affected by all abrasions. Most abrasions were observed in swim turf and least in lime mud. In the South zone, almost no abrasion was present in the layers belonging to the hollow area, only in peat and peat mud a few rounded bones were found. In the South, the bones least affected by abrasions were found in the peat/peat mud, as well as in the grey mud layers. In the East zone, few abrasions were present in the flooded area, and they were relatively evenly distributed per layer. The humus layer and reddish peat had least abrasions and only a few of them were polished. Few bones were found in the outside area and most of them were affected by abrasions. In the West zone, abrasions were present in the flooded area, polishing was more present than the other. Few bones were found in the outside area, half of them were affected. The most prominent type of abrasions in the Bottom zone were rounding, but abrasions were affecting most of the bones. In the Mixed zone, polishing of the bones dominated among the abrasions, distributed both in the flooded area and outside (figure 9).

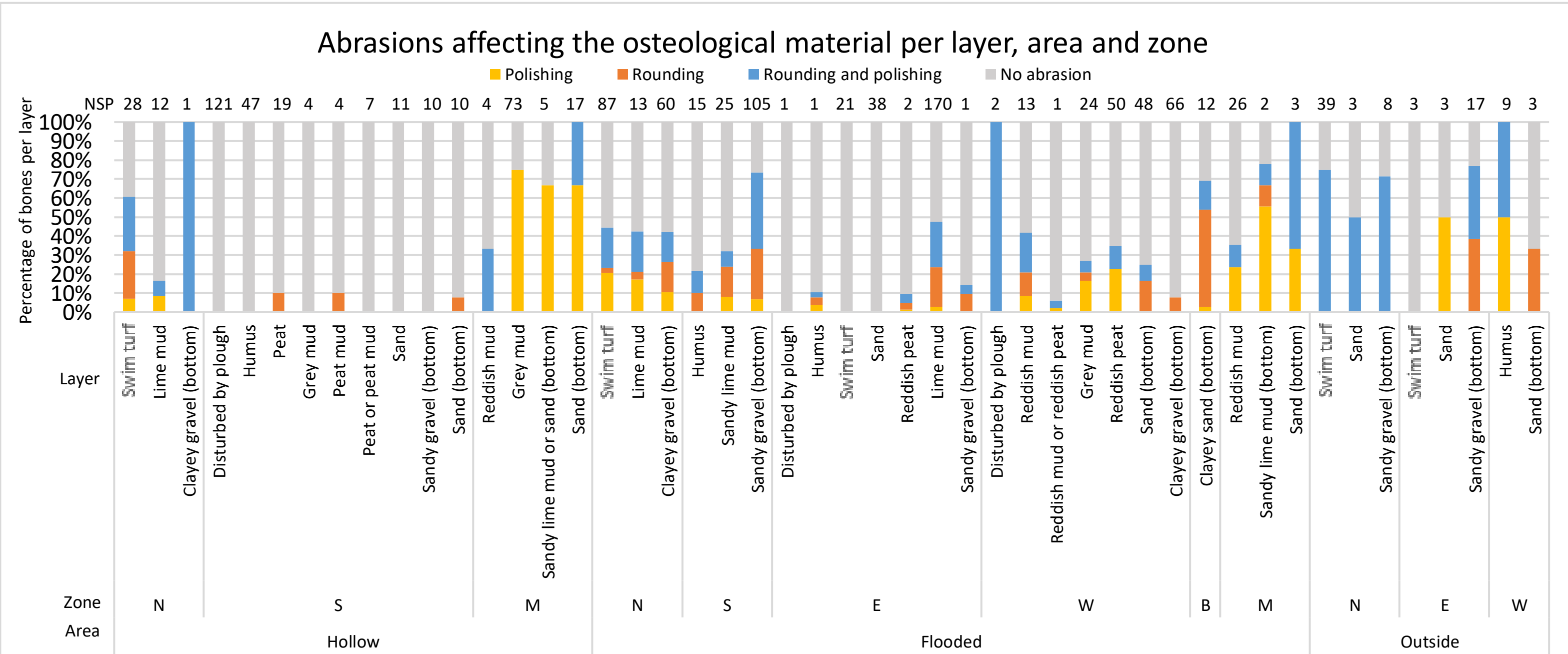


Figure 9: The presence of different abrasions in each area, zone and layer in correlation to bones not affected by abrasions. The factors accounted for by the NSP found per layer, zone, and area.

6.3 Weathering

Weathering was categorized according to Boethius (2020: 10-11) with an added category of not applicable for bones too heavily affected by abrasion to be determined a weathering degree. This was due to abrasions which had erased the textures of the surface or smoothened them down and polished them. Additionally, the bones and fragments of bones in the not applicable category were noticeably heavy and dense in comparison to the other bones. Many of the bones were categorized as weathering stages 1 and 2, some in 3, and some in not applicable. On the contrary, there were only a few bones placed in categories 4 and 5. The best-preserved bones belonged to the South zone, though the bones in the East zone`s hollow area had slightly better preservation than the South zone hollow area. Most of the bones were found in the flooded area, and the least were found outside. Bones outside both the hollow and flooded area had few bones and many of the bones belonged to the not applicable category (figure 10).

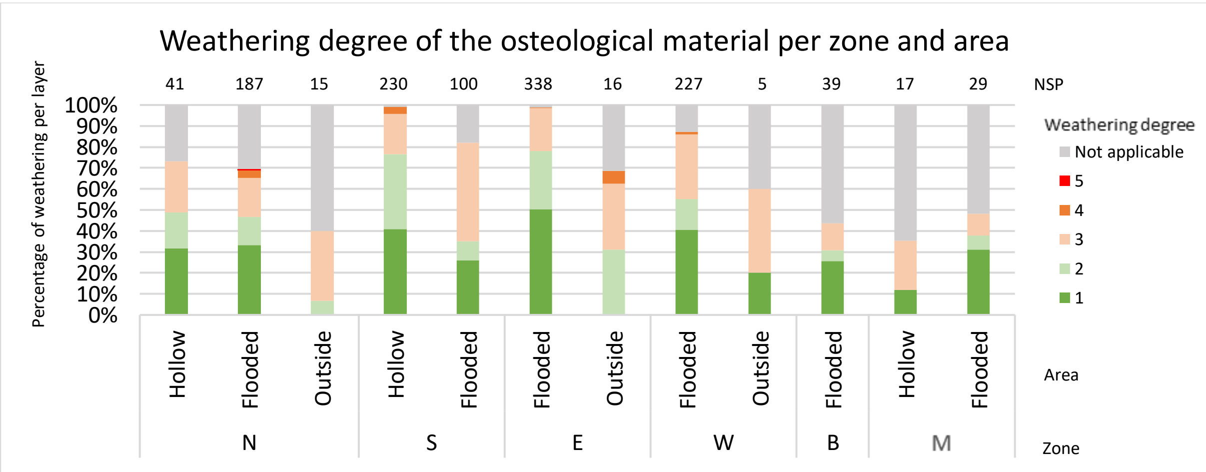


Figure 10: Diagram of the weathering degree of the osteological material per zone and area, based on the NSP.

In the North zone (figure 11a), well-preserved bones were found in layers of lime mud and swim turf, belonging to the flooded area. Many better-preserved bones were also observed in these layers, as well as in the hollow. In the layers belonging to the flooded area, some bones were very badly preserved. Outside of the hollow and flooded area, few bones were found, and the majority were not well preserved or not applicable (figure 11b).

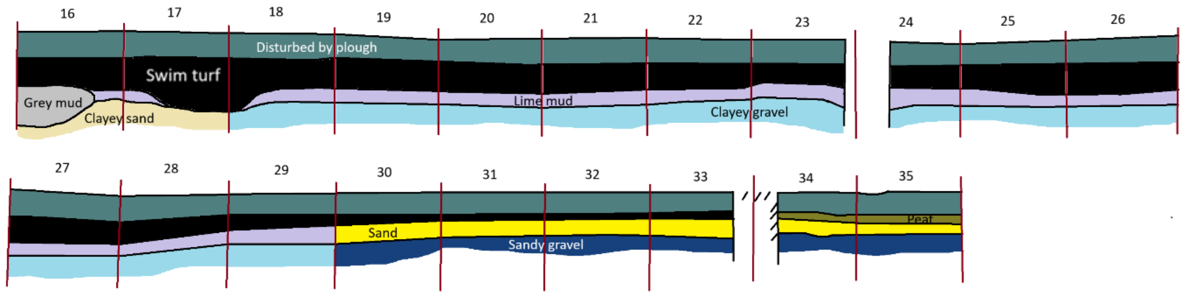


Figure 11a: Drawn profile from the North zone with layer description, based on mm drawing from the 1961-1962 excavations. Made by Linnea Broman ©2025.

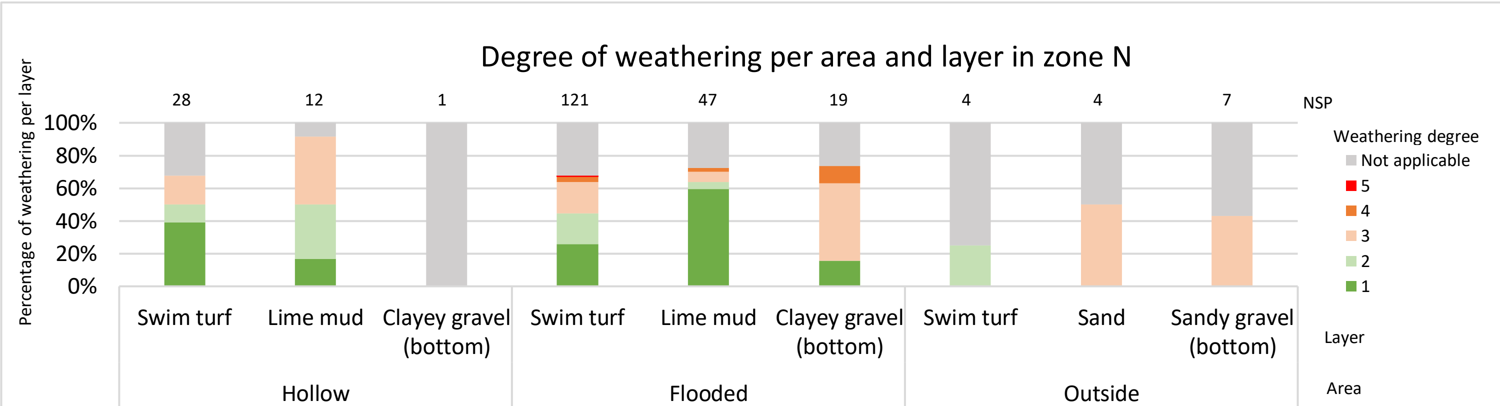


Figure 11b: Diagram of the weathering degree in zone N per layer and area, based on the NSP.

In the South zone (figure 12a), most of the osteological material had a relatively low weathering degree, with only a few bones assessed as not applicable. Best preservation was observed in the layer of peat or peat mud and grey mud in the flooded hollow, and in the humus layer in the flooded area. Layers from flooded areas contained good-preserved bones, as well as some that were not as well preserved (figure 12b).

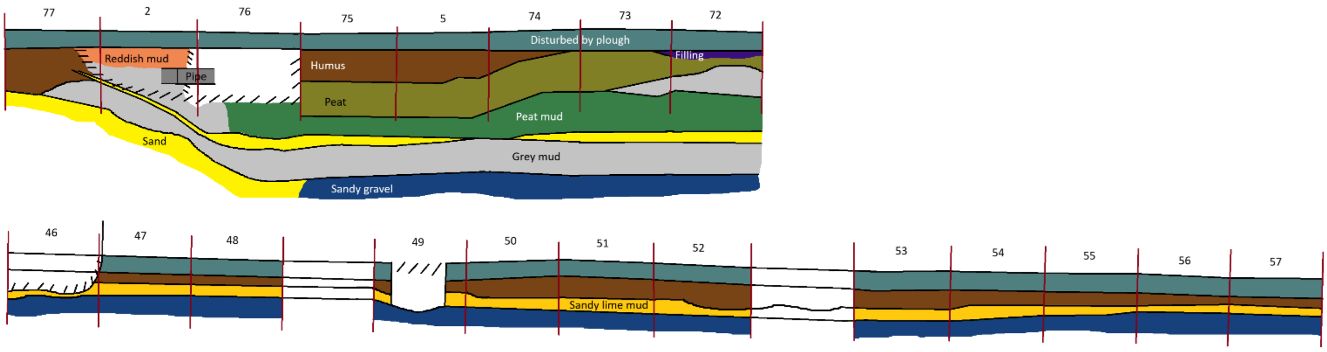


Figure 12a: Drawn profile from the South zone with layer description, based on mm drawing from the 1961-1962 excavations. Made by Linnea Broman ©2025.

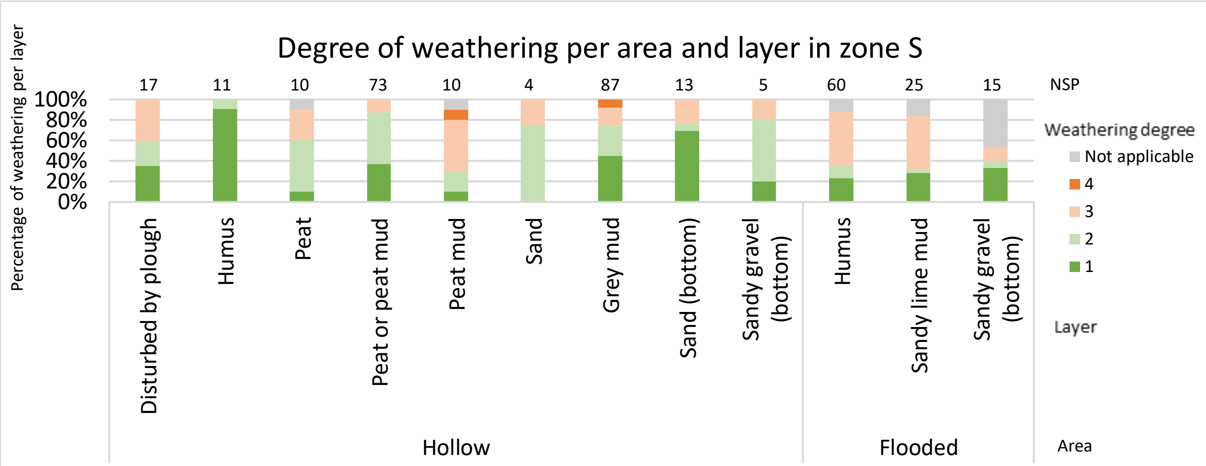


Figure 12b: Diagram of the weathering degree in zone S per layer and area, based on the NSP.

In the East zone (figure 13a), the preservation varied throughout the zone and layers. Especially well-preserved bones were found in the reddish peat and humus layer, belonging to the flooded area. Bones from the flooded area were also well-preserved in the lower layers. Not many bones were found in the area outside of the flooded area, and most bones were less well preserved or not applicable (figure 13b).

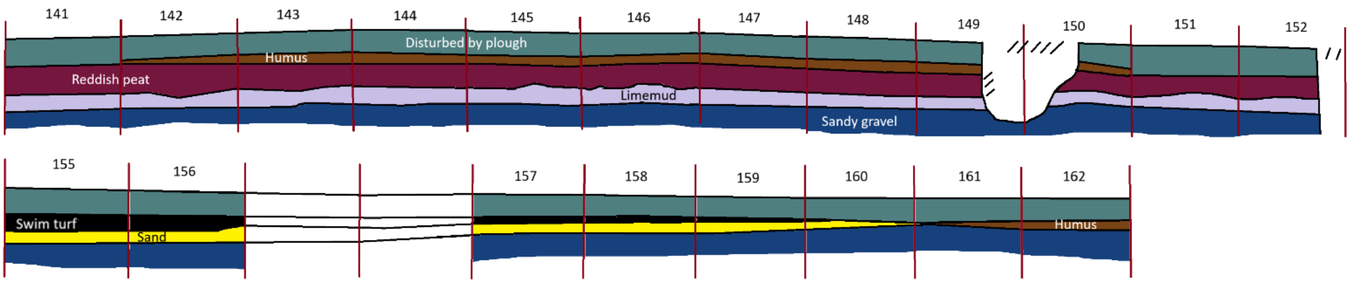


Figure 13a: Drawn profile from the East zone with layer description, based on mm drawing from the 1961-1962 excavations. Made by Linnea Broman ©2025.

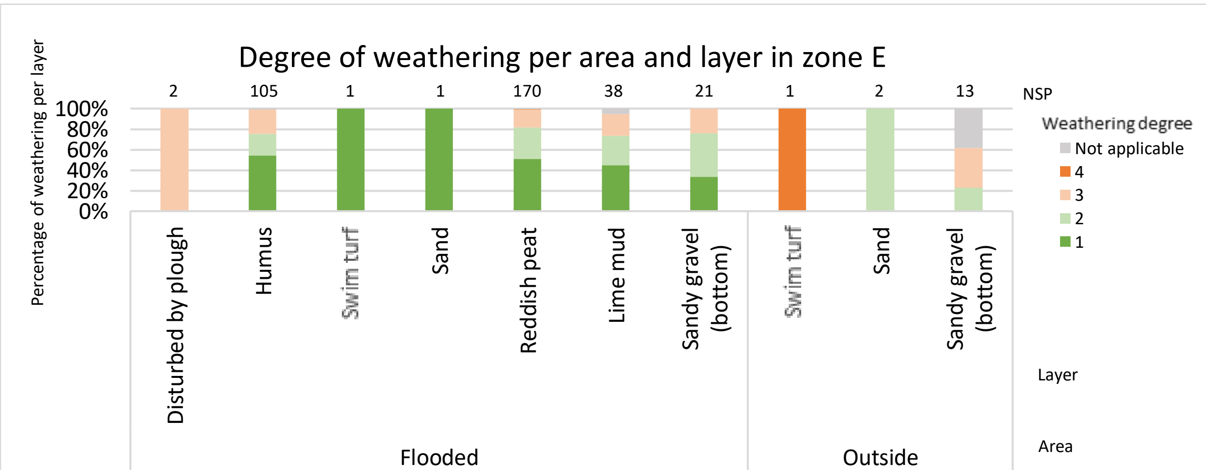


Figure 13b: Diagram of the weathering degree in zone E per layer and area, based on the NSP.

In the West zone (figure 14a), the preservation degree varied throughout the layers. Most of the better-preserved bones were found in the flooded area, generally increasing in preservation deeper down. The sandy bottom layer was the exception. The layer disturbed by plough and the humus layer, had few bones but all had a not applicable weathering category (figure 14b).

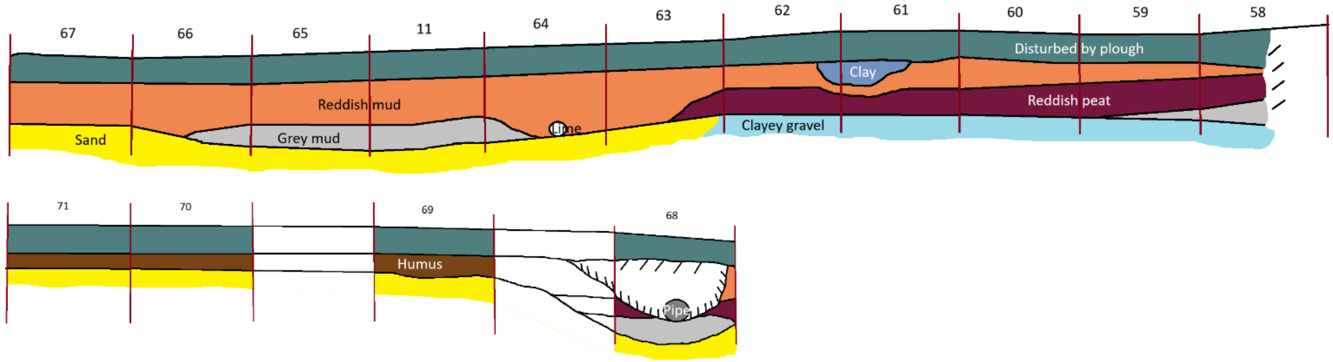


Figure 14a: Drawn profile from the West zone with layer description, based on mm drawing from the 1961-1962 excavations. Made by Linnea Broman ©2025.

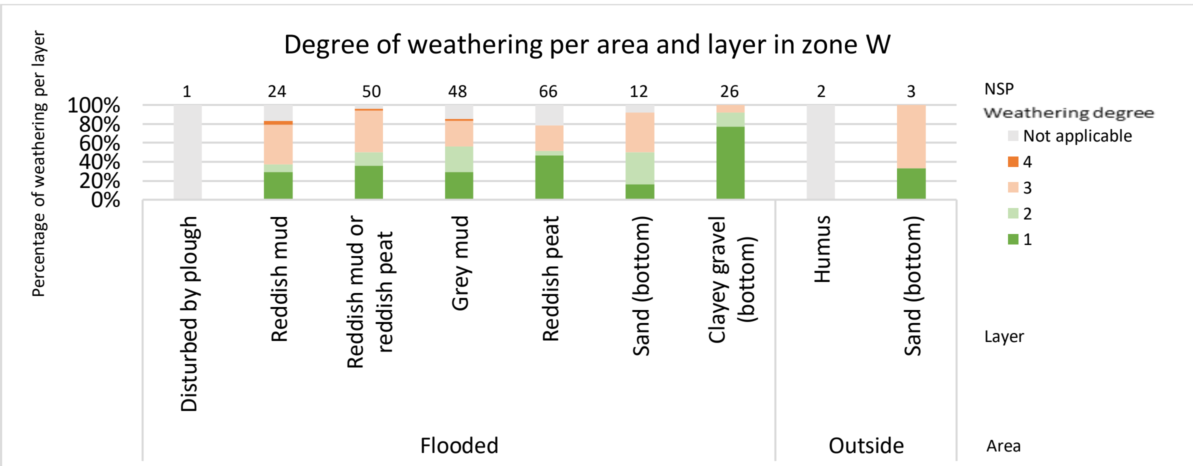


Figure 14b: Diagram of the weathering degree in zone W per layer and area, based on the NSP.

Zone B (figure 15a) only consisted of the bottom layer, belonging to the flooded area. Many bones could not be put in a weathering category due to abrasion affecting them to the point where it was not possible to discern the weathering degree. However, some of the bones were better preserved (figure 15b).

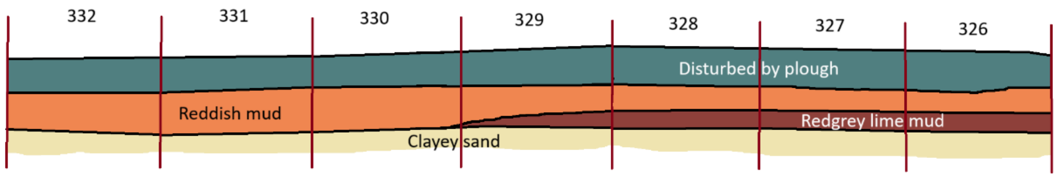


Figure 15a: Drawn profile from the Bottom zone with layer description, based on mm drawing from the 1961-1962 excavations. Made by Linnea Broman ©2025.

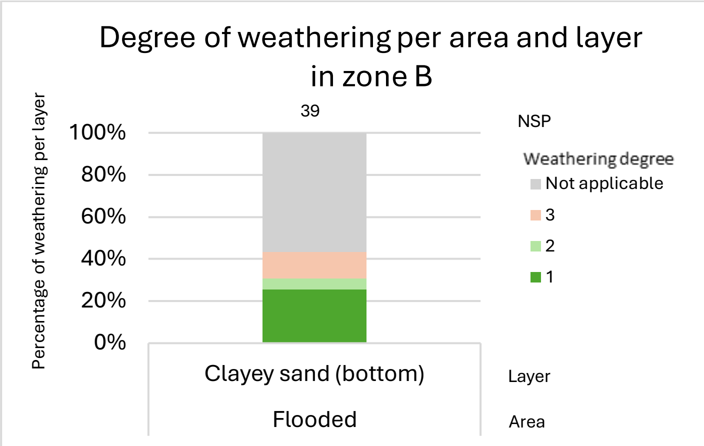


Figure 15b: Diagram of the weathering degree in zone B per layer and area, based on the NSP.

In zone M (figure 16a), the best preservation was observed in the reddish mud in the flooded area. The majority of the bones from the hollow were not as well preserved, unable to apply a weathering degree to the bones. The bones from the flooded area were better preserved in reddish mud, but in the bottom layers' preservation were predominantly not applicable (figure 16b).

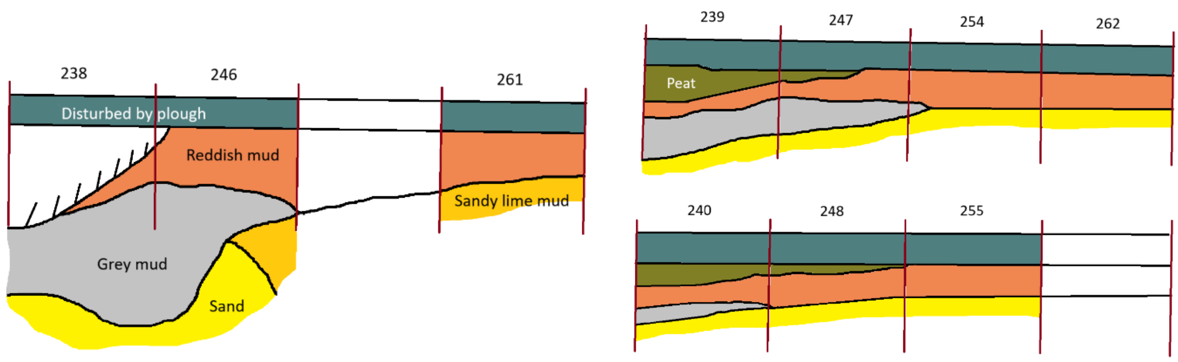


Figure 16a: Drawn profile from the Mixed zone with layer description, based on mm drawing from the 1961-1962 excavations. Made by Linnea Broman ©2025.

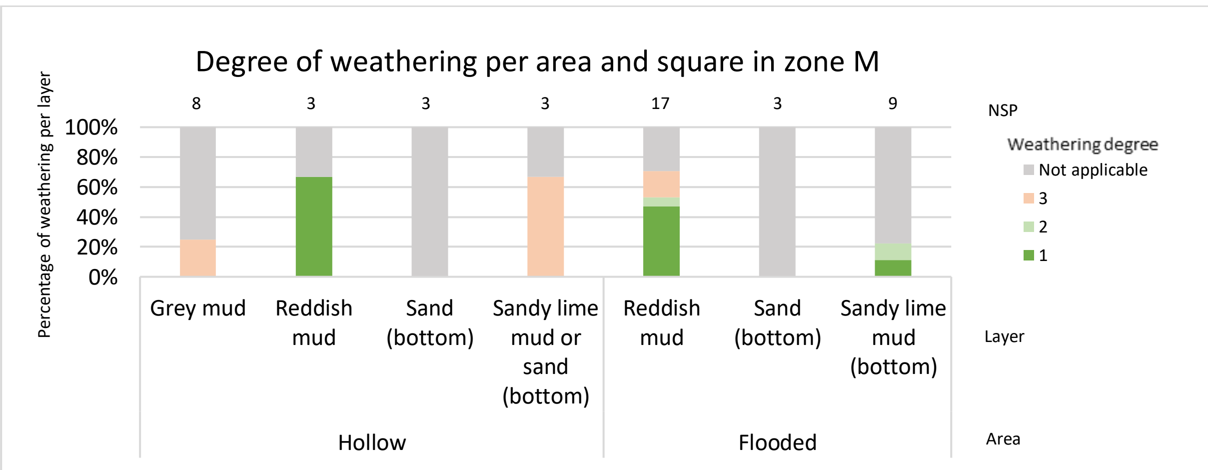


Figure 16b: Diagram of the weathering degree in zone M per layer and area, based on the NSP.

6.4 Root etching, abrasion, and trampling

Root etching and abrasions did mostly correlate with each other, where areas with more abrasion had fewer root etched bones and areas with fewer abrasions had more root etched bones. Abrasions were prominent in the North zone, where only a few root etched bones were observed in the hollow and flooded areas. In the South zone, almost no root etching nor abrasions were observed in the hollow area, though abrasions were present in the flooded area. Some root etching was observed on the bones from the flooded area in the South. Bones with root etching were pronounced in the flooded area in the East zone, and few bones had abrasions. Outside of the flooded area more abrasions were recorded in comparison to the root etched bones. In the West zone, root etched bones were more prominent than abraded ones and in the outside area only abrasions were observed. Both root etched and abraded bones were present in the flooded area of the Bottom zone. In the Mixed zone, both the hollow and the flooded area were similarly affected by slightly more abrasions than root etched bones (figure 17).

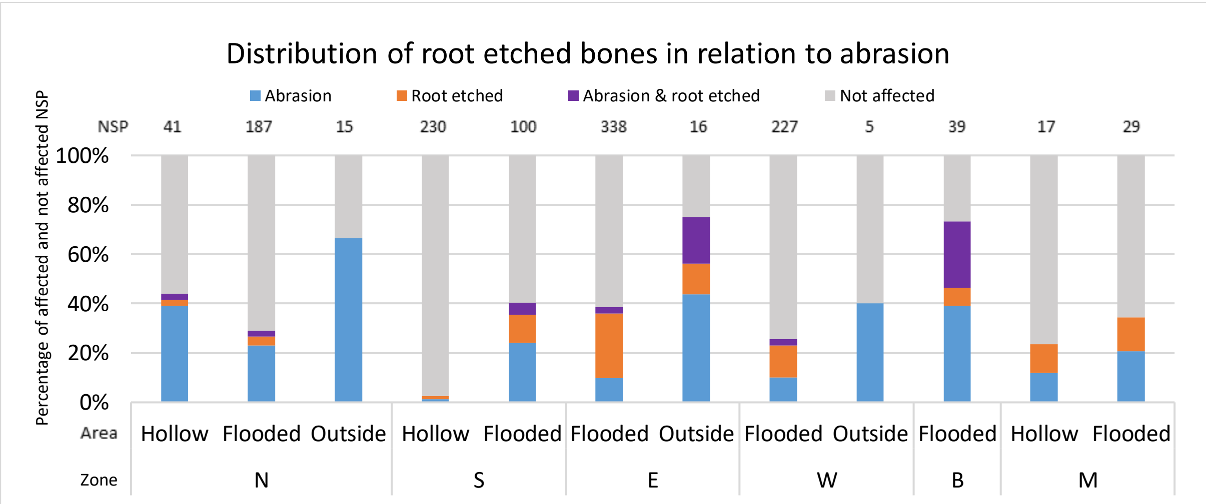


Figure 17: Distribution of root etching and abrasion per area and zone, bones with both root etching and abrasions were merged. The not affected bones are displayed in correlation with the affected bones.

In the North zone, the presence of root etching and trampling were percentwise evenly distributed in nearly all the areas. Trampling was most prominent, and very few bones were root etched. Most of the root etched bones were found in the flooded area. In the South zone, some trampling were observed in the hollow zone and only a few bones in some of the mud or bottom layers were root etched. In the flooded area, root etching was more prominent than trampling and was present in all layers. Root etching was, in the East zone, most prominent in the upper layers in the flooded area and few trampled bones were found in the swim turf. In the deeper and bottom layers of the flooded area, root etched bones were few and trampling dominated. In the outside both trampling and root etched bones were present. In the West zone, most of the bones in the flooded area were root etched, rather than trampled. Very few bones were found outside of the flooded area and few bones were trampled. In the Bottom zone, only root etching had affected the bones, no trampling was observed. Very few roots have affected the bones from the Mixed zone, and they were mostly present in the uppermost layers. Few trampled bones were observed in the outside area and the sandy lime mud bottom (figure 18).

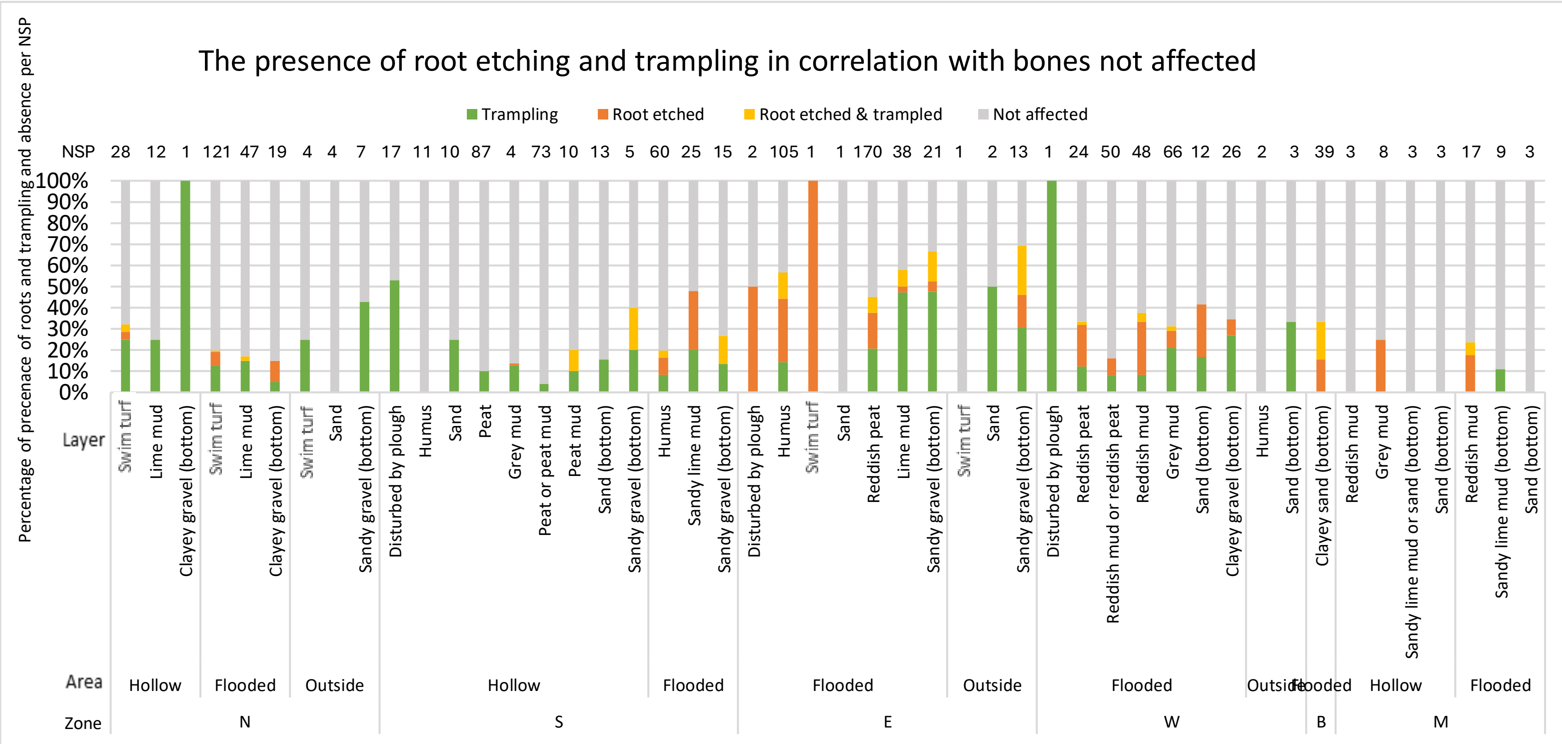
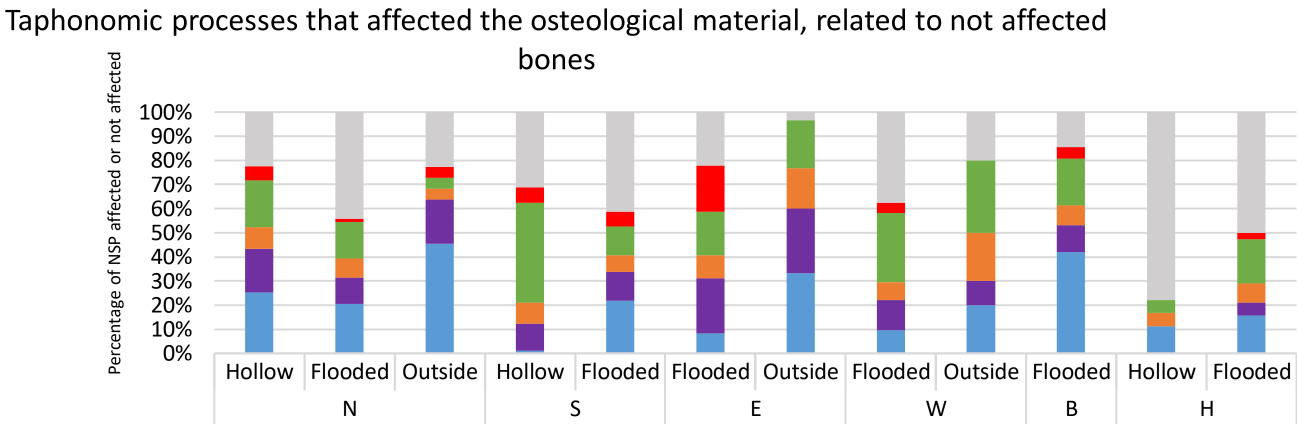


Figure 18: Distribution of root etching and trampling on the osteological material per layer, area, and zone. All bones found in each zone were accounted for (NSP). In the West zone, the flooded and outside area were represented. In the Bottom zone, only the flooded area was represented.

6.5 Anthropogenic, natural, and pre-depositional processes + recent damage

Gnaw marks, as well as butchery marks and marrow split bone (anthropogenic factors) were present in every area. Anthropogenic factors were most prominent in the hollow area of the South zone and the West zone. Gnaw marks were, percentwise, similarly present in all the zones and areas. Recent damages were present everywhere except from the East zone outside, West zone outside, and the Mixed zone hollow. These zones had in common that few bones were found in them, which could affect the results (figure 19). Most prominent were the recent damage in the East zones flooded layer, which had few abrasions, more trampling, and fewer gnaw marks and anthropogenic factors (figure 19 & appendix I: figure 23 & figure 24). The least recent damage had affected the bones in the Western zone, they were instead affected by abrasions, gnaw marks, and anthropogenic factors. The hollow area of the South zone stood out, with almost no abrasion, few trampled or gnawed bones, many bones affected by anthropogenic factors and few recent damages (figure 19 & appendix I: figure 25 & figure 26).



	Hollow	Flooded	Outside	Hollow	Flooded	Flooded	Outside	Flooded	Outside	Flooded	Hollow	Flooded
	N			S		E		W		B	H	
Not affected	15	101	5	86	55	108	1	112	2	9	14	19
Recent damage	4	3	1	17	8	93		13		3		1
Butchery marks & marrow split	13	35	1	114	16	88	6	85	3	12	1	7
Gnaw marks	6	18	1	24	9	47	5	22	2	5	1	3
Trampling	12	25	4	31	16	110	8	37	1	7		2
Abrasion	17	47	10	3	29	41	10	29	2	26	2	6

Figure 19: Distribution of different taphonomic factors visible on the bones and not visible, in relation to NSP. It is divided per zone and the different areas within each zone.

7. Discussion

Osteological material in wetland environments have been very well preserved at sites such as Ageröd, Star Carr, Skedemosse (Althin 1947; Lepiksaar 1967; Hagberg 1967; Clark 1971; Larsson 1978). Increasing degradation of bones in wetlands and changes in their environment have in recent times been lifted at these sites (High *et al.* 2018: 175-192; Boethius *et al.* 2020a; Kjällquist *et al.* 2022). The multiperiod site of Röekillorna Spring, have been lifted as an interesting offering site, where horses and dogs were the dominating species. However, the springs' fluvial activity has disturbed the layer sequences, deeming them not to be trusted. The bones have been affected by the energy of the water and moved around between layers and areas. The osteological material has been revisited in recent years and analysed for ritual acts, the presence of specific species, and their importance.

This analysis was made regarding the increasingly highlighted deterioration of preservation in wetlands, to gain knowledge of how osteological materials were affected in a spring environment surrounded by agricultural fields.

In this thesis, the osteological material from Röekillorna spring (Löderup parish) were analysed based on the questions; which taphonomic processes have affected the osteological material? How have taphonomic processes, geological factors, and fluvial activity affected the preservation of the bones, and where have the bones been best preserved?

The osteological material from Röekillorna Spring was affected by abrasions, weathering, trampling, gnaw marks, butchery marks, marrow splitting, root etching, and recent damage. The analyses showed that the most prominent taphonomic processes were the anthropogenic factors, found on approximately 35% of the analysed bones, whilst the material were least affected by gnaw-marks (approximately 11%) and recent damage (approximately 11%). Some of the bones were affected by more than one taphonomic process. The presence of water has affected the weathering of the bones, where high and low fluvial activity has good preservation conditions, but the upwelling of groundwater has rounded and polished the bones to such a degree that no morphological characteristics were visible. Floodings have led to the osteological material being transported further away from its original deposition. Favorable preservation conditions were observed in the spring, where the pH-values were neutral to slightly alkaline. The bones have been best preserved in the spring (hollow area), in the South zone, and in layers of peat, and/or mud.

7.1 Taphonomic processes present in the material

Anthropogenic factors that had affected the osteological material were butchery marks and marrow splitting of the bones. Butchery marks were visible on approximately 27% of the bones, marrow splitting were only present on 8% of the complete material. The anthropogenic processes found on the material could, as mentioned by Magnell (2013), indicate that the bones had been used for food and feasting, in relation to the spring. The bones had probably been butchered and split, left on the ground or thrown into the spring. The fragmentation of the bones could also be caused by other taphonomic processes as well such as abrasions and recent damage (figure 19).

Among natural processes abrasions were most prominent, visible on about 26% of the bones. The most common abrasion was rounding and polishing of the bones (figure 9). The polished bones closely resemble varnished bones, however, the varnished bones were located in areas where the bones were brittle, thin, had written text, and where they were glued together. Abrasions could be indicative for the preservation and fragmentation of the bones. As mentioned by Yezzi-Woodley *et al.* (2018), fluvial activity affects the preservation of bones, varying between the size, weight, and energy of the water. The flow of water transports lighter bones further away, while the bigger and heavier bones are distributed closer to the area where they were deposited. The bones could, as mentioned by Behrensmeyer (1982), become further abraded by cycles of reburying and again influenced by fluvial activity.

Root etching was observed on 15% of the bones analysed from the site. Root etching of the bones indicated in correlation to taphonomic processes and previous studies made by Stjernquist (1997), that some areas have been dry, or at least dryer located outside of the spring (hollow). Other areas were more affected by fluvial activity with higher energy (figure 17). As highlighted by Tjelldén (2015: 383-384) roots are less probable to take root in water flows with high energy. Roots could affect the preservation of the bones and the degree of fragmentation, due to the etching of the surface and breaking of the bones (Lyman 1994: 375-377).

Some bones had weathering degrees 3 or 4, but most of the bones had a low weathering degree (figure 10). Some of the bones could not be attributed to any weathering criteria because they were too heavily abraded. Weathering are complex processes linked to the surroundings and other taphonomic processes, which are important to analyse because they can provide further insight into a site. As Goudie and Viles (2016: 71-72) highlighted, hydrology affects the possibility of analysing taphonomic processes visible on the bones surface. Similar to abrasions, the weathering of bones could completely remove anthropogenic marks and tooth marks by rounding or removing the surface of the bones (Nunnally 2018: 46). Bones showing more weathering, are more easily broken and fragmented, which would affect the degree of fragmentation and preservation of the bones (Lyman 1994: 377-380).

Pre-depositional processes incorporated both gnaw marks present on about 11% of the material and trampling observed on about 20% of the bones (figure 19). As mentioned by Magnell (2013), the presence of gnaw marks could indicate that the bones had been left on the ground after butchering, being affected by other taphonomic processes as well such as trampling. Gnaw marks provided insight into how the bones were handled after the animal's death and/or butchering. Trampling of the bones indicated that the degree of fragmentation occurred due to anthropogenic factors, and that more traversed areas were located outside the spring. Lyman (1994: 377-380) highlighted that bones buried in loose sediments or above ground could become displaced by trampling, where the pressure could push the bones down in the ground in different directions. This could be applied to the bones in the flooded and outside zones, indicating that humans and other animals used these areas before the flooding.

Butchery marks and gnaw marks present on the bones could indicate that they did not necessarily get thrown into the spring, badly weathered bones could have been left on the ground and later affected by the floodings during the Iron Age.

Recent damages were observed on about 11% of the analysed material (figure 19). These could have occurred during excavations, where bones could have been broken due to the handling, as mentioned by Cassman, Odegard, and Powell (2007: 32). Roots could also have damaged the bones in recent times, growing on the surface, into them, and/or breaking them apart.

7.2 Taphonomy, fluvial process, and geological factors

Higher fluvial activity in the South zone might have buried the bones more quickly into the sediments, initially consisting of a lot of peat and mud which changed into sand, and calcareous mud further away from the spring. This has been observed at Star Carr, and in experiments made regarding the preservation of bones in fluvial activity (Knight *et al.* 2018; Yezzi-Woodley *et al.* 2018: 37-50). The composition of the soil contained in many layers of clay and/or organic material that, as mentioned by Oghenemavwe, Orupabo, and Horsfall (2022), would have made the soil more resistant to fluctuating pH-values. Most prominent layers regarding the presence of both identified and unidentified bones were swim turf, humus, reddish peat, and grey mud (figure 4 & appendix I: table 8 & figure 22). The peat or peat mud layer, and lime mud were also rich in osteological material.

Generally, peat and peat mud layers provide good preservation conditions for organic materials, due to anaerobic and anoxic conditions formed in the bog (Renfrew & Bahn 2016:59). Peat is formed by partially decomposed organic (plant) matter, where waterlogged or saturated soils are decelerating the decay. These conditions preserve osteological material very well, if it is not acidic (Hansson, Kjällquist & Boethius 2024: 1-2). The majority of the bones found in the South, East, and West zones were encountered in the peat, peat mud, and/or reddish peat layers. In the South zone, the bones from the peat and peat mud layers were found in the hollow area. Well preserved bones were also found in the grey mud layer in the south. Both in the East and West zones a reddish peat layer was present in the flooded area, which showed a low degree of weathering on most of the bones. In the East zone, the humus layer in the flooded area had almost as well-preserved bones as in the peat layers. In the Mixed zone, most of the bones were found in the reddish mud layer, belonging to the hollow and flooded area. These bones were least affected by weathering in the zone. The least weathering, in the North zone, was observed in the lime mud layers, but most of the bones were found in the swim turf. Horses were most prominent in the reddish peat, humus layer and in the grey mud. Most horse bones were, overall, found in the uppermost layers. Dogs were the most prominent in swim turf, and thereafter in mud and peat layers deeper down. Sheep and sheep/goat were predominantly concentrated to the grey mud. Cattle bones were mostly found in deeper layers, concentrated in the sandy bottom gravel and peat or peat mud layers (table 4 & figure).

Different preservations of osteological material in wetland environments are related to how the sediments have been formed and their content (Larsson 2020: 9). The high iron content visible in the waters of Röekillorna spring might have affected the osteological material. Iron is alkaline, which affects the pH-value. This might have influenced the samples taken in areas where the spring water was more present and possibly made the pH-value higher. Therefore, the better-preserved bones in the hollow area might have partially been caused by the measured 7,7 pH value during Stjernquist excavations. Additionally, clay could also have buffered the pH-conditions in the sediments, causing a higher pH-value according to Ismail-Mayer, Vach & Rentzel (2020: 944).

7.3 Preservation at the site

In the southern zone, most of the osteological material was well preserved, despite being exposed to some anthropogenic factors, which has affected the fragmentation of the bones. Many fragmented bones were present in the South zone, they were larger in comparison to the other zones. Contrary to the East zone, the South did not have much recent damage affecting the bones (figure 4). Instead, butchery marks were the most prominent factors which affected the majority of the bones. Worth noting, were that most of the bones with recent damage had butchery marks (appendix I: figure 23 & figure 24). This indicated that the degree of fragmentation of the bones was connected to the anthropogenic processes, rather than recent damage of the bones observed in the east. Abrasions were few in the South zone (figure 8), which were interpreted to be caused by higher fluvial activity present, as mentioned by Domínguez-Rodrigo *et al.* (2019) and Yezzi-Woodley *et al.* (2018), instead of no fluvial activity at all. Few root etched bones were present, which correlated with the fact that most of the South zone constituted the spring (hollow). The outflow of the spring was according to Stjernquist (1997) located there, consistent with the few root etched bones found and the continuity of layers in the South zone. The contour map in Stjernquist (1997) displayed a continuous sloping and lowering of the ground southwards and the flooded area were interpreted to extend further south. Trampling were present in almost the whole South zone, which correlated to the abundance of butchery marks present on the bones. Differences between layers might have been connected to how the fluvial activity had affected the movement of the bones in and between layers. Good preservation conditions were observed, which in relation to the root etched bones might indicate that the south has been exposed to fluvial activity with higher energy. This might cause the bones to be buried more quickly in the sediments, as Yezzi-Woodley *et al.* (2018) highlighted, therefore being less affected by other taphonomic processes. The better preservation of bones in neutral to slightly alkaline conditions could additionally be a reason why the bones were best preserved in the South zone, which mostly belongs to the spring and only partially had been affected by the outflow of the spring.

In the East zone, a higher degree of fragmentation was observed (figure 6 & appendix: table 6) which might have been caused by recent damage and anthropogenic factors. In the East zone, abrasion present in the flooded area was outweighed by the root etched bones present on the material. Root etching and trampling could, in correlation with abrasions, indicate that the area was used and walked upon before the flooding took place (figure 17 & figure 18). The flooded area was probably dryer during the periods from the Stone Age to the Bronze Age. Stjernquist (1997) mentions that bigger stones and tools used for butchery purposes were found clustered together in the East zone, with marrow split and butchered bones found around it. From the weathering perspective, the bones were well preserved (figure 10), further strengthening the interpretation of recent damage affecting the fragmentation of the bones.

In the Western zone, the osteological material were spread out, and there was a greater spread of root etching over the layers (figure 18). This zone might have been more of a used area, as the movement of the water may have had less of an impact, as mentioned by Domínguez-Rodrigo *et al.* (2019). Few abrasions were present on the material, whilst butchery marks were the prominent factor. Most of the identified bones were from cattle, horses, and dogs, however the unidentified bones were more than the identified ones. The degree of weathering were low in the peat and bottom layer of clayey gravel, belonging to the flooded area. Some better-preserved bones were present in the muddy layers. Contrary to the South zone, and similar to the East zone, more root etched bones than abrasions were found in the flooded area but on the few bones in the outside area only abrasions were present. This further strengthened the interpretations that the area was used during the Stone Age and Bronze Age. The abrasion present was mostly polishing, which in correlation with the trampling of the bones could indicate that the ground had been walked upon, pushing the bones into the sediment polishing the surface. Additionally, only the West and Bottom zones had bones from seals present in the material, found in the flooded area in the middle to bottom layers. In both the west and east, the bones were less affected by abrasions, which was consistent with the fact that the bones were located outside the spring and its flooded area.

The North zone was located a little higher than most of the other zones, according to the contour map in Stjernquist (1997: 21), the East zone being the exception. The layer of swim turf was distinctive for the North zone and contained many bones (figure 8). The bones found in this zone were overall the most fragmented compared to the other zones (figure 6). The zone had mainly been dry from the Stone Age to the Bronze Age, before the floodings, however many bones showed signs of abrasions. Correlating with the degree of fragmentation, the weathering was, mostly, not so well or not applicable. Almost no root etched bones were found, which could, as mentioned by Tjelldén (2015: 383-384) and Lyman (1994: 375-377), indicate that the bones were affected by high movements of water. The root etched bones were present in the flooded area. The trampling present on the osteological material could, as mentioned by Magnell (2013), have been caused by the use of the area. The number of anthropogenic factors affecting the bones might indicate that the area could have been used to prepare and butcher animals.

A lot of fluvial activity was observed in the Mixed zone which, like the South zone, contained more well-preserved bones in the hollow area, than in the flooded area. Many of the bones belonged to heavier species such as horses and cattle, where horses were less fragmented than the cattle bones. The dogs were the least fragmented (figure 7). Many abrasions were present, which affected the weathering degree. As mentioned by Yessi-Woodly *et al.* (2018), high energy waters could lead to the bones being more damaged correlated with the majority of the material not being assigned to a weathering category. Almost no recent damages were found on the bones. Few gnaw marks, and anthropogenic factors present on the bones indicate that the bones had been faster deposited in the water. As mentioned by Aslan & Behrensmeyer (1996), Yessi-Woodly *et al.* (2018), and Domínguez-Rodrigo *et al.* (2019), marks made by animals and humans could get worn away due to being heavily abraded. Another factor that indicates that more complete bones were being deposited, was a relatively low degree of fragmentation in the hollow area (appendix I: figure 22). The few root etched bones observed, also correlated with the energy of the waterflow in the hollow area of the zone, as well as later floodings, which could have made it hard for roots to grow.

In the Bottom zone, most of the bones were not that fragmented, but they were much affected by abrasions. All bones came from the flooded area, where once again the presence of relatively many root etched bones were found. Much of the abrasion found on the material was connected to rounding, which could indicate that the bones were affected by a lot of trampling. Trampling could be observed on some of the bones where the rounding could be an effect of sediments rounding off the bones. The majority of the bones had a not applicable weathering, probably due to the fluvial activity and the usage of the zone. Some bones had both been root etched and trampled, which indicated that they had been exposed above ground or possibly in the uppermost layers. Butchery marks were present, but much of the bones were fragmented and not as well preserved. The material in the bottom layer shared similar characteristics with the West and East zone, affected by the usage of the site before the flooding. Few gnaw marks alongside trampling indicated that the bones had not been as exposed above ground. Taking the abrasion into consideration, they were probably deposited in the spring directly or after they were butchered.

7.4 Conclusions

The conclusions drawn from the material, based on the taphonomic factors present in the material and fluvial activity, were that the peat layers preserved the bones best. These layers generally provide good preservation conditions for organic materials in bogs, due to anaerobic and anoxic conditions being formed (Renfrew & Bahn 2016: 59), decelerating the decay of the organic matter if not acidic (Hansson, Kjällquist & Boethius 2024: 1-2). The high iron content visible in the waters of Röekillorna Spring could indicate that the slightly higher pH-levels (7,7). might have contributed to well preservation of the osteological material. The spring is surrounded by agricultural fields, which have possibly been affected by fertilizers that influence soil chemistry and could have made the environment acidic. The iron in the spring might therefore have influenced the preservation of the osteological material at the site. In comparison to other studies made in wetland environments and how taphonomy has affected the bones, the site showed similarities with both bogs and rivers. In the hollow, the conditions show similarities with the layer sequence found in bog environments with good preservation as in Ageröd (Althin 1947; Larsson 1978) and Star Carr (Clark 1971) before the 20th century. However, Röekillorna had a slightly higher pH-value and open water. Geological processes and fluvial activity have affected the preservation of the osteological material at Röekillorna. Behrensmeyer (1982) mentioned that bones found in fluvial channels and waters often have been transported by fluvial movement, which had mixed the bones and moved lighter bones further away. Temporary storage of bones in the sediment and layer subjected to fluvial activity could lead to the bones becoming more abraded (Behrensmeyer 1982: 213-

214). The more heavily abraded bones at Röekillorna could be indicative for such cycles of fluvial activity tumbling the bones around. The South zone, was believed to be the outflow of the spring and might have been less affected by the upwelling of groundwater from below and rather affected by the higher fluvial activity of the outflow. This might be one reason for the bones in the south not being as much affected by abrasion. The bones in the south, originally placed there, might have flooded away further south outside of the analysed area. Stjernquist (1997) mentions that more analyses were made further south from the spring, in hopes of finding the edge of the flooded area which were not found. The bones present might have belonged to other layers and layers washed down into the south layers more recently. In the North zone where the fire well was placed, a noticed pressure from below had been observed in the well when it was placed at the site, which could indicate that there was a higher activity of groundwater upwelling in that area. The upwelling water could have affected the lower layers more heavily, whilst the outflow of the spring affected the upper layers more (figure 8). The outflow in the south might, in relation to the very few abrasions found on the material in relation to the Mixed zone, indicate that the outflow was located more in the area between the South and Mixed zone where no squares were made. The flow of water could have been more prominent towards the southeast where the layers, according to the contour map in Stjernquist (1997: 21) were lower. The flooded area at Röekillorna showed similar to river systems with fluvial activity observed by Yezzi-Woodley *et al.* (2018), who observed that higher fluvial activity and flooding transported lighter bones further away from their original deposition, whereas the heavier bones stayed closer to their origin.

7.5 Future studies in wetland environments

In future investigations of similar wetland sites as Röekillorna, the fluvial activity, upwelling water, and possible direction of the outflow of water would be important to consider, because they affect where the bones are best preserved. The best places to analyse would be in the spring itself, by the outflow of the spring, and in the flooded area close to the spring. Layers of peat and mud would be of most interest to analyse, if the peat environment was not acidic, because they could provide well-preserved osteological material. Waterlogged areas at a site could provide good preservation of the bones, less impacted by animals, roots, and weathering. If there were flooded areas at the site, excavations would likely provide the best abundance of bones a couple of meters from the spring, as observed at Röekillorna, and rapidly decrease with distance. In wetlands with stronger fluvial activity, a higher concentration of larger bones could be located closer to the water with an increased fragmentation further out. If a sacrificial spring were to be excavated, the edge of the spring would, in addition to the spring itself, be examined because complete individuals might have been placed right at the water's edge. Areas of dry land, which have been dry during all periods the wetland was used, would be given less priority. These areas could, like Röekillorna, have fewer bones preserved due to the area being trampled and used, but also due to the weathering of bones. In areas with upwelling groundwater, analyses could be difficult to make though the water not only affects the layer sequence but also the ability to observe specific characteristics on the bones.

7.6 Further studies of Röekillorna

Further studies of the osteological material from Röekillorna Spring would benefit from using correspondence analysis to show the results of the analysed material. Correspondence analysis could be used to further analyse variations in taphonomic processes visible at the site, as well as the frequencies of bones affected by taphonomy in relation to layers and area. Macheridis and Magnell (2020), used Multiple Correspondence Analysis (MCA) when analysing bones from the Old Uppsala Late Iron Age (650–1050 CE), to gain contextual and spatial awareness of the material. MCA could provide an overall taphonomic history of the bones at Röekillorna. It would also be interesting to make further analysis of the actual placement of the bones provided by Stjernquist (1997), to analyse the bones' relation towards each other with the help of correspondence analyses. Together with the taphonomic analysis, this could provide a deeper understanding of how the bones have been moved at the site.

By analysing the whole material from Röekillorna, the results observed in this study could be used to further analyse how the material have moved at the site. It would also be of interest to compare the spring with other wetland environments both excavated during the 1960s and more recent excavations in springs or similar wetlands. Because of the observed differences and degradations in the preservation in bogs (High *et al.* 2018: 175-192; Boethius *et al.* 2020a; Kjällquist *et al.* 2022), it would be interesting to take pH-samples at the site, to further compare the site with others and gain an indication of the preservation condition.

8. Summary

The purpose of this thesis was to, through taphonomic analyses of the osteological material from Röekillorna, analyse how fluvial and geological processes have affected the preservation of the bones and where they were best preserved, in relation to taphonomic processes. To achieve this, animal bones from chosen squares were looked at. The results indicated that the best-preserved bones were observed in the spring and in the outflow of the spring, where the fluvial activity was stronger. The occurrence of taphonomic processes such as abrasions, root etching, and butchery marks, did not necessarily indicate poor preservation conditions, some rather indicated good preservation together with other factors and *vice versa*. In comparison to other analyses made on wetland environments, the results showed similarities with many different wetlands, preserving the bones best in the peat and mud layers, as well as in higher fluvial activity. The overall good preservation of the osteological material was considered to be due to the pH-values, rapid burial of bones through fluvial activity, and possibly the higher iron content in the water. It is important to keep in mind that the bones were excavated during the 1960s, which might influence the preservation in comparison to more recent studies of wetland events, due to changes in climate, further eutrophication, drainage, and pollution of wetland environments.

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Appendix I

Table 5: The distribution of taphonomic markers visible on the bones divided by the zones.

Zone	Abrasion	Butchery marks	Marrow split	Gnaw marks	Trampling	Root etched	Recent damage	Number of fragments
N	112	47	6	25	41	13	8	243
S	35	121	21	33	47	19	25	330
E	59	80	34	52	118	102	93	354
W	58	77	26	24	38	35	13	232
B	27	11	5	5	7	13	3	39
M	28	6	4	4	2	6	1	46
Sum	**319**	**342**	**96**	**143**	**253**	**188**	**143**	**1244**

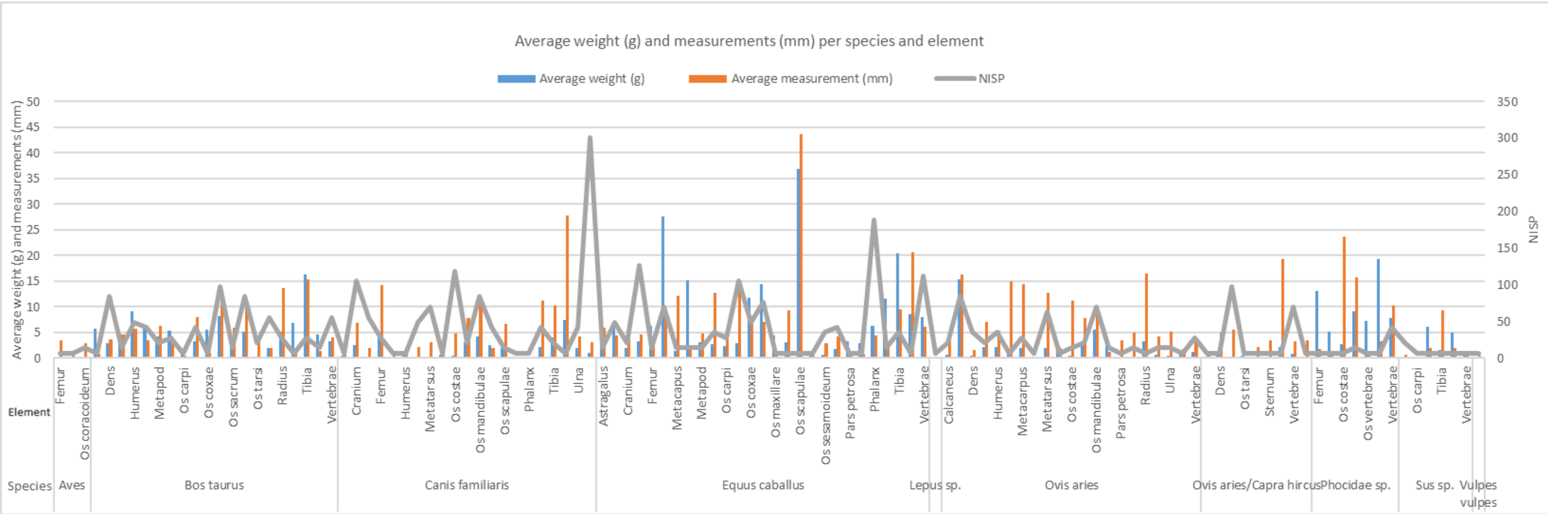

Figure 20: The distribution of elements per species and their fragmentation degree, Average weight (g) and average measurements (mm) are present in the left axle, and the NISP present by the right axle. Bone found from hare (Lepus sp.) is a vertebra, and from fox (Vulpes vulpes) a tooth.

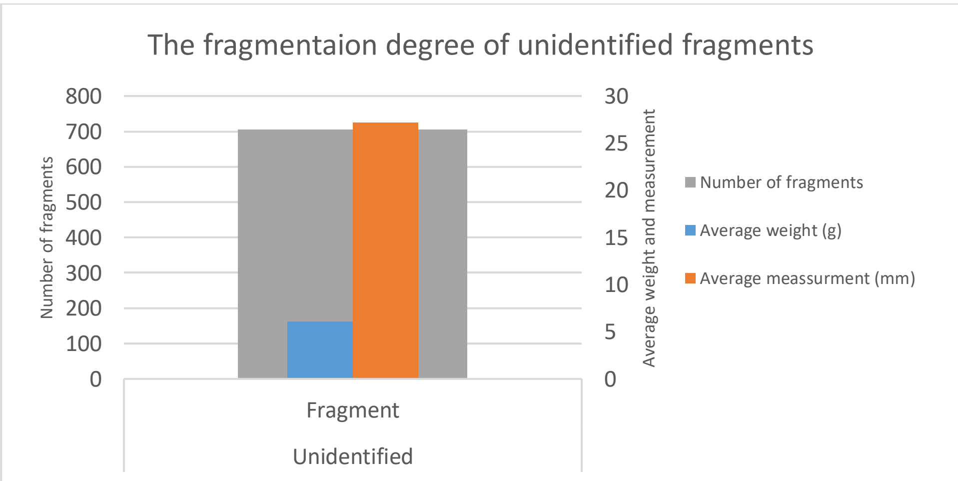

Figure 21: Unidentified fragments present in the osteological material and their degree of fragmentation. Number of fragments presented in the left axle and the average weight (g) and average measurements (mm) in the right axle.

Table 6: The average weight (g) and measurement (mm) per bones and fragments, per zone and area.

Zone and area	Average weight (g)	Average measurement (mm)	Sum of analysed bones
N	**7,31**	**26,37**	**243**
Hollow	9,91	27,00	41
Flooded	6,44	25,81	187
Outside	10,98	31,67	15
S	**26,39**	**41,42**	**330**
Hollow	31,87	49,26	230
Flooded	14,08	23,79	100
E	**9,53**	**29,85**	**354**
Flooded	9,49	29,86	338
Outside	10,36	29,57	16
W	**17,20**	**34,67**	**232**
Flooded	17,17	34,92	227
Outside	18,52	24,00	5
B	**17,19**	**37,41**	**39**
Flooded	17,19	37,41	39
M	**40,67**	**59,51**	**46**
Hollow	61,47	83,56	17
Flooded	29,19	46,24	29
Sum	**16,32**	**34,42**	**1244**

Table 7: Table over the presence of unidentified bones per layer.

Layer	Unidentified
Disturbed by plough	6
Humus	137
Reddish mud	22
Peat	5
Reddish mud or reddish peat	25
Swim turf	83
Reddish peat	165
Lime mud	59
Sand	6
Sandy lime mud	15
Sandy gravel (bottom)	42
Grey mud	31
Clayey gravel (bottom)	21
Sandy lime mud (bottom)	3
Clayey sand (bottom)	19
Peat or peat mud	50
Peat mud	4
Sand (bottom)	11
Sum	**704**

Table 8: Table over the presence of bones per zone, area, and layer.

Zone, area, layer	N	S	E	W	B	M	Sum
⊟Hollow	**41**	**230**				**17**	**288**
Disturbed by plough		17					17
Swim turf	28						28
Humus		11					11
Peat		10					10
Peat or peat mud		73					73
Peat mud		10					10
Reddish mud						3	3
Grey mud		87				8	95
Sand		4					4
Sandy lime mud or sand (bottom)						3	3
Sand (bottom)		13				3	16
Clayey gravel (bottom)	1						1
Lime mud	12						12
Sandy gravel (bottom)		5					5
⊟Flooded	**187**	**100**	**338**	**227**	**39**	**29**	**920**
Clayey sand (bottom)					39		39
Disturbed by plough			2	1			3
Swim turf	121		1				122
Humus		60	105				165
Reddish mud				24		17	41
Reddish mud or reddish peat				50			50
Grey mud				48			48
Sand			1				1
Reddish peat			170	66			236
Sand (bottom)				12		3	15
Clayey gravel (bottom)	19			26			45
Sandy lime mud		25					25
Lime mud	47		38				85
Sandy gravel (bottom)		15	21				36
Sandy lime mud (bottom)						9	9
⊟Outside	**15**		**16**	**5**			**36**
Swim turf	4		1				5
Humus				2			2
Sand	4		2				6
Sand (bottom)				3			3
Sandy gravel (bottom)	7		13				20
Sum	**243**	**330**	**354**	**232**	**39**	**46**	**1244**

Table 9: Table over the average weight (g) and measurements (mm) of the bones and fragments per layer.

Layer	Average weight (g)	Average measurement (mm)	NSP
Disturbed by plough	110,81	15,32	14
Humus	24,51	6,55	41
Reddish mud	33,95	9,00	22
Peat	38,38	10,00	5
Reddish mud or reddish peat	22,08	5,78	25
Swim turf	12,69	7,46	72
Reddish peat	22,28	8,44	70
Lime mud	17,66	7,82	38
Sand	16,61	4,16	5
Sandy lime mud	88,03	12,63	10
Sandy gravel (bottom)	84,98	11,06	19
Grey mud	32,35	9,47	112
Clayey gravel (bottom)	18,46	8,85	25
Sandy lime mud (bottom)	62,37	9,25	6
Clayey sand (bottom)	27,10	8,33	20
Peat or peat mud	33,47	9,93	23
Peat mud	37,84	12,92	6
Sandy lime mud or sand (bottom)	22,62	12,33	3
Sand (bottom)	42,90	7,83	23
Sum	**30,40**	**8,64**	**539**

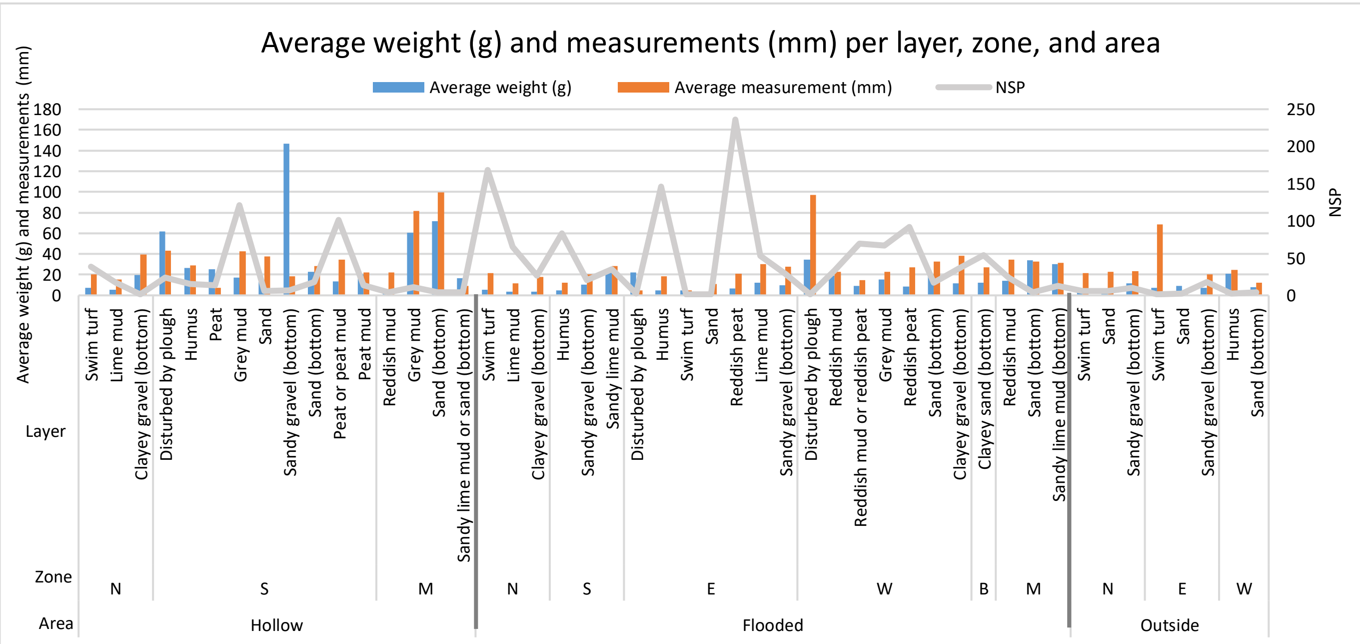

Figure 22: The fragmentation degree distributed per layer, zone, and area. The average weight (g) and measurements (mm) found in the left axle and the NSP on the right.

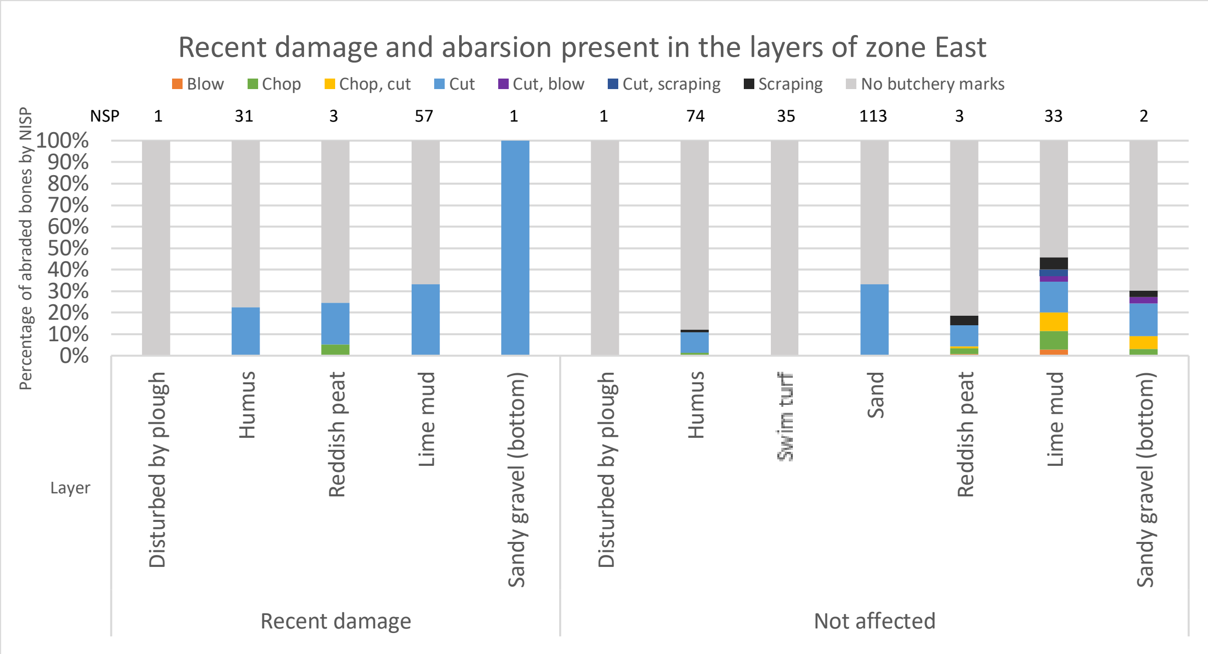

Figure 23: The distribution of recent damage and butchery marks in relation to each other and the NSP, zone E.

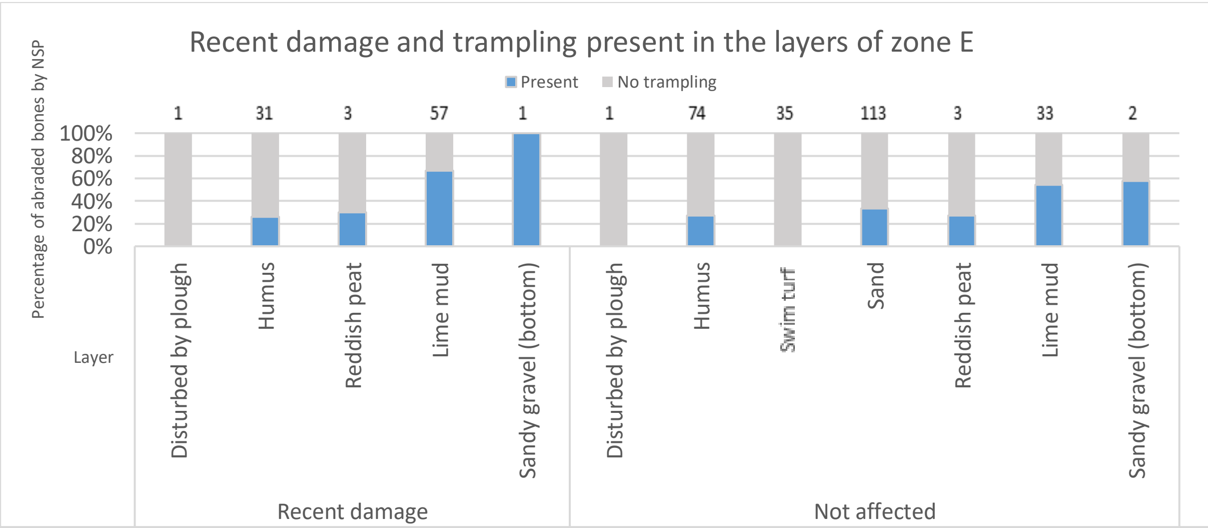

Figure 24: The distribution of recent damage and trampling in relation to each other and the NSP, zone E.

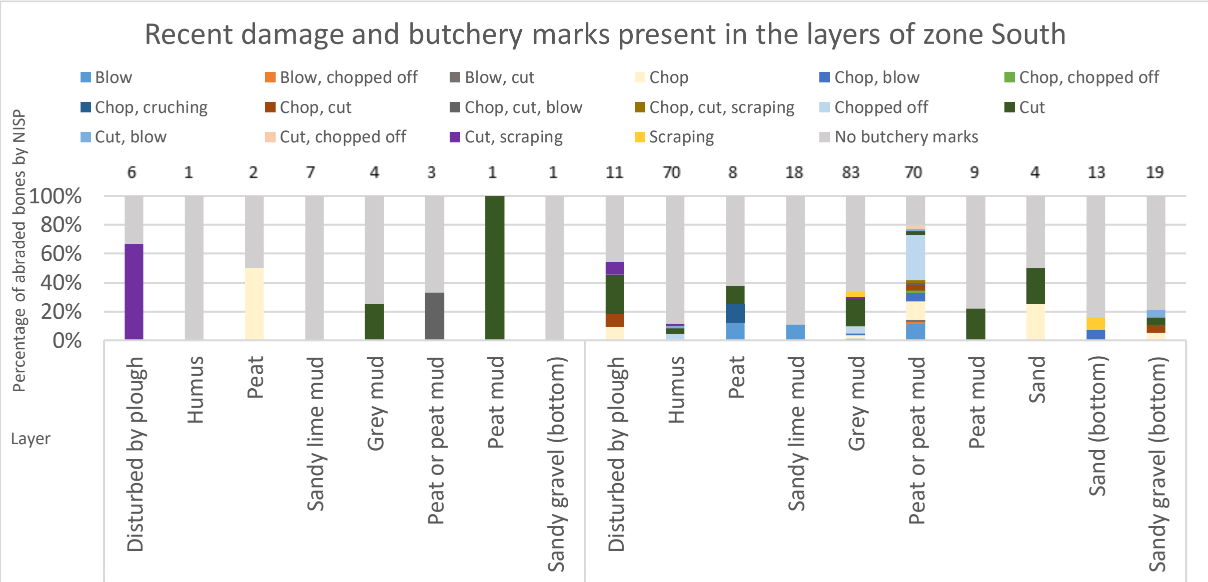

Figure 25: The distribution of recent damage and butchery marks in relation to each other and the NSP, zone S.

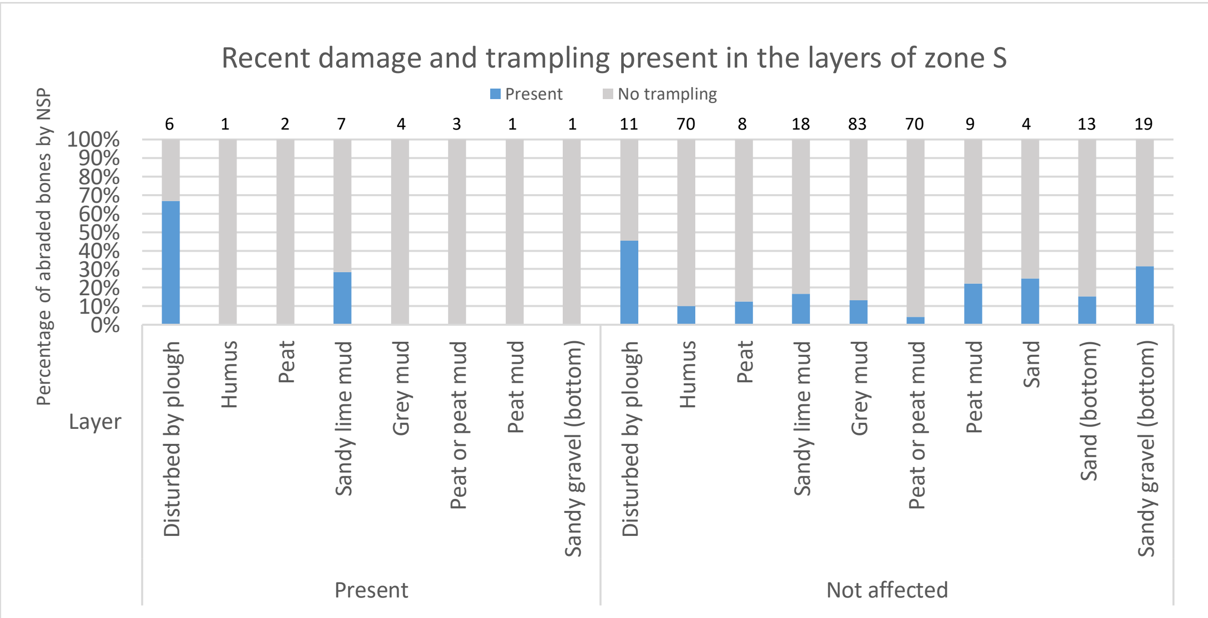

Figure 26: The distribution of recent damage and trampling in relation to each other and the NSP, zone S.

Appendix II

Database of the registered osteological material from Röekillorna Spring (needs to be zoomed to be visible).

LUHM	Area	Zone	Coordinates	Square nr.	Find nr.	Layer	Depth (cm)	Species	Element	Part	Side	Quantity	Weight (g)	Measurment (mm)	Abrasion	Weathering (Boethius)	Trampling	Gnaw-marks	Butchery-marks	Marrow split	Root etched	Recent damage	Notes
31433	Hollow	N	x=+1, y=+1	16	1	Swim turf	25-35	Equus caballus	Os costae	Corpus costae 60%		1	19,73	15	Rounding and polishing	Not applicable		Scraping	Scraping	Yes			
31433	Hollow	N	x=+1, y=+1	16	2	Swim turf	35-45	Unidentified		Fragment		1	9,71	5	Rounding	3	Present				Present		
31433	Hollow	N	x=+1, y=+1	16	3	Swim turf	45-55	Unidentified		Fragment		1	2,59	5	Rounding	1				Yes			
31433	Hollow	N	x=+1, y=+1	16	4	Swim turf	45-55	Unidentified		Fragment		1	1,07	35	Rounding	3				Yes			
31433	Hollow	N	x=+1, y=+2	17	1	Swim turf	25-35	Unidentified		Fragment		1	1,84	3	Rounding	1						Present	
31433	Hollow	N	x=+1, y=+2	17	2	Swim turf	25-35	Unidentified		Fragment		1	1,16	25	Rounding	1							
31433	Hollow	N	x=+1, y=+2	17	3	Swim turf	25-35	Unidentified		Fragment		1	5,34	5	Rounding	Not applicable	Present						
31433	Hollow	N	x=+1, y=+2	17	4	Swim turf	25-35	Unidentified		Fragment		1	25,39	11	Rounding and polishing	Not applicable			Blow				
31433	Hollow	N	x=+1, y=+2	17	5	Swim turf	25-35	Unidentified		Fragment		1	4,05	8		1	Present		Cut, scraping				
31433	Hollow	N	x=+1, y=+2	17	6	Swim turf	25-35	Bos taurus	Metatarsus	Proc. articularis (complete 50%), diafys (complete 40%)		1	32,49	14		3		Gnaw, scraping	Cut, blow, chop	Yes			
31433	Hollow	N	x=+1, y=+2	17	7	Swim turf	25-35	Canis familiaris	Dens	p4+	Dex.	1	2,16	25		2							
31433	Hollow	N	x=+1, y=+2	17	8	Swim turf	35-45	Unidentified		Fragment		1	6,52	45	Rounding and polishing	Not applicable							
31433	Hollow	N	x=+1, y=+2	17	9	Swim turf	45-55	Equus caballus	Atlas	Fragment	Dex.	1	48,31	7		3	Present						
31433	Hollow	N	x=+1, y=+2	17	10	Swim turf	45-55	Equus caballus	Atlas	Fragment	Sin.	1	29,78	75		3	Present					Present	
31433	Hollow	N	x=+1, y=+3	18	1	Swim turf	25-35	Unidentified		Fragment		1	2,25	35	Rounding and polishing	Not applicable			Chop				
31433	Hollow	N	x=+1, y=+3	18	2	Swim turf	25-35	Unidentified		Fragment		1	2,24	3		1							
31433	Hollow	N	x=+1, y=+3	18	3	Swim turf	25-35	Unidentified		Fragment		1	2,04	3	Rounding and polishing	Not applicable							
31433	Hollow	N	x=+1, y=+3	18	4	Swim turf	25-35	Lepus sp.	Vertebrae cervecale	Complete 80%		1	0,68	2		1						Present	
31433	Hollow	N	x=+1, y=+3	18	8	Swim turf	35-45	Unidentified		Fragment		1	12,69	95	Rounding and polishing	Not applicable	Present						
31433	Hollow	N	x=+1, y=+3	18	9	Swim turf	35-45	Bos taurus	Os scapulae	Fragment		1	23,6	10	Rounding and polishing	Not applicable	Present	Gnaw, chew, scraping	Cut				
31433	Hollow	N	x=+1, y=+3	18	10	Swim turf	35-45	Unidentified		Fragment		1	30,02	135	Polishing	2	Present		Blow	Yes			
31433	Hollow	N	x=+1, y=+3	18	11	Swim turf	35-45	Unidentified		Fragment		1	0,42	2	Rounding	1							
31433	Hollow	N	x=+1, y=+3	18	12	Swim turf	35-45	Unidentified		Fragment		1	2,84	55	Polishing	1		Scraping					
31433	Hollow	N	x=+1, y=+3	18	13	Swim turf	35-45	Canis familiaris	Vertebrae thoracicae	Complete 95%		1	3,3	5	Rounding and polishing	Not applicable		Chew				Present	
31433	Hollow	N	x=+1, y=+3	18	14	Swim turf	35-45	Canis familiaris	Vertebrae lumbale	Complete 80%		1	6,08	35		2							
31433	Hollow	N	x=+1, y=+3	18	15	Swim turf	35-45	Canis familiaris	Vertebrae thoracicae	Complete 95%		1	6,99	35		1							
31433	Hollow	N	x=+1, y=+3	18	16	Swim turf	35-45	Canis familiaris	Metatarsale IV	Complete		1	3,66	75		1					Present		
31433	Hollow	N	x=+1, y=+3	18	17	Swim turf	35-45	Unidentified		Fragment		1	0,69	25		1							
31433	Hollow	N	x=+1, y=+3	18	18	Lime mud	60-	Bos taurus	Os costae	Corpus costae 40%	Sin.	1	34,31	21	Polishing	2	Present		Cut, scraping				
31433	Hollow	N	x=+1, y=+3	18	19	Lime mud	60-	Unidentified		Fragment		1	0,33	35		2							
31433	Hollow	N	x=+1, y=+3	18	20	Lime mud	60-	Bos taurus	Metapod	Diafys (complete 40%)		1	28,26	14	Rounding and polishing	Not applicable	Present	Gnaw	Cut	Yes			
31433	Hollow	N	x=+1, y=+3	18	21	Lime mud	60-	Canis familiaris	Os costae	Corpus costae 40%		1	2,73	75		2	Present						
31433	Hollow	N	x=+1, y=+3	18	22	Lime mud	60-	Unidentified		Fragment		1	5,03	4		3							
31433	Hollow	N	x=+1, y=+3	18	23	Lime mud	60-	Unidentified		Fragment		1	1,98	4		3							
31433	Hollow	N	x=+1, y=+3	18	24	Lime mud	60-	Unidentified		Fragment		1	5,73	45		3			Chop				
31433	Hollow	N	x=+1, y=+3	18	25	Lime mud	60-	Unidentified		Fragment		1	1,55	4		3							
31433	Hollow	N	x=+1, y=+3	18	26	Lime mud	60-	Equus caballus	Dens	di2-	Dex.	1	2,97	4		2							
31433	Hollow	N	x=+1, y=+3	18	27	Lime mud	60-	Canis familiaris	Vertebrae caudalis	Complete		1	1,32	25		1							
31433	Hollow	N	x=+1, y=+3	18	28	Lime mud	60-	Unidentified		Fragment		1	1,5	3		1							
31433	Hollow	N	x=+1, y=+3	18	29	Lime mud	60-	Ovis aries	Tibia	Dist. epiphysis (complete)	Dex.	1	5,52	25		3							
31433	Hollow	N	x=+1, y=+3	18	30	Clayey gravel (bottom)	65-	Bos taurus	Phalanx I	Complete		1	27,31	55	Rounding and polishing	Not applicable	Present		Cut				
31433	Flooded	N	x=+1, y=+4	19	1	Swim turf	25-35	Unidentified		Fragment		1	4,12	45	Rounding and polishing	Not applicable		Gnaw, scraping					
31433	Flooded	N	x=+1, y=+4	19	2	Swim turf	25-35	Unidentified		Fragment		1	1,55	45	Polishing	3							
31433	Flooded	N	x=+1, y=+4	19	3	Swim turf	25-35	Unidentified		Fragment		1	3,57	45	Rounding and polishing	Not applicable	Present						
31433	Flooded	N	x=+1, y=+4	19	4	Swim turf	25-35	Canis familiaris	Phalanx II	Complete		1	0,65	2		2							
31433	Flooded	N	x=+1, y=+4	19	5	Swim turf	35-45	Unidentified		Frament		1	0,96	4		1							
31433	Flooded	N	x=+1, y=+4	19	7	Swim turf	35-45	Canis familiaris	Metacarpalia	Complete 95%		1	0,21	2		3		Puncture					
31433	Flooded	N	x=+1, y=+4	19	8	Swim turf	35-45	Unidentified		Fragment		1	0,44	2		3							
31433	Flooded	N	x=+1, y=+4	19	9	Swim turf	35-45	Unidentified		Fragment		1	0,4	3		2							
31433	Flooded	N	x=+1, y=+4	19	10	Swim turf	35-45	Unidentified		Fragment		1	0,72	25	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4	19	11	Swim turf	35-45	Unidentified		Fragment		1	1,24	3	Rounding and polishing	Not applicable							Marked as 13, Møhl changed it to number 11
31433	Flooded	N	x=+1, y=+4	19	12	Swim turf	35-45	Canis familiaris	Vertebrae thoracicae	Complete 60%		1	1,57	2		1							
31433	Flooded	N	x=+1, y=+4	19	13	Swim turf	35-45	Unidentified		Fragment		1	1,7	25		3							
31433	Flooded	N	x=+1, y=+4	19	14	Swim turf	35-45	Unidentified		Fragment		1	2,52	55		1	Present		Chop				
31433	Flooded	N	x=+1, y=+4	19	15	Lime mud	55-65	Unidentified		Fragment		1	0,84	45		1		Gnaw, pitting, scraping					
31433	Flooded	N	x=+1, y=+4	19	17	Lime mud	55-65	Unidentified		Fragment		1	1,76	25		1							
31433	Flooded	N	x=+1, y=+4	19	18	Lime mud	55-65	Unidentified		Fragment		1	0,72	3		1							
31433	Flooded	N	x=+1, y=+4	19	19	Lime mud	55-65	Unidentified		Fragment		1	0,56	35		3							
31433	Flooded	N	x=+1, y=+4	19	20	Lime mud	55-65	Canis familiaris	Metatarsale	Diafys 95%		1	1,9	5		1							
31433	Flooded	N	x=+1, y=+4	19	21	Lime mud	55-65	Canis familiaris	Os costae	Complete 50%		1	2,5	8		1	Present						
31433	Flooded	N	x=+1, y=+4	19	22	Lime mud	55-65	Canis familiaris	Vertebrae	Fragment		1	0,65	2	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4	19	23	Lime mud	55-65	Canis familiaris	Vertebrae lumbale	Complete 80%		1	2,66	3		2							
31433	Flooded	N	x=+1, y=+4	19	24	Lime mud	55-65	Canis familiaris	Vertebrae cervicale	Complete 80%		1	9,79	4	Polishing	1							
31433	Flooded	N	x=+1, y=+4	19	25	Lime mud	55-65	Canis familiaris	Tibia	Complete	Dex.	1	23,06	185	Polishing	Not applicable	Present		Cut				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	26	Swim turf	(-100/-107)	Canis familiaris	Tibia	Complete	Sin.	1	39,51	18	Rounding and polishing	Not applicable			Scraping				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	27	Swim turf	(-100/-107)	Canis familiaris	Femur	Complete	Sin.	1	43,92	185	Rounding and polishing	Not applicable			Scraping		Present		
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	28	Swim turf	(-100/-107)	Canis familiaris	Radius	Complete	Dex.	1	18,25	155	Rounding and polishing	Not applicable	Present						
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	29	Swim turf	(-100/-107)	Canis familiaris	Femur	Complete	Dex.	1	44,63	185	Rounding and polishing	Not applicable					Present		
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	30	Swim turf	(-100/-107)	Canis familiaris	Femur	Diafys	Dex.	1	10,08	13	Polishing	1	Present						
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	31	Swim turf	(-100/-107)	Canis familiaris	Os coxae	Os illium, acetabulum & os ichium (complete)	Dex.	1	31,48	145	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	32	Swim turf	(-100/-107)	Canis familiaris	Os coxae	Os illium (complete70%), acetabulum (complete), os ichium (complete 30%)	Sin.	1	28,34	14	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	33	Swim turf	(-100/-107)	Canis familiaris	Radius	Complete	Sin.	1	24,19	165	Rounding and polishing	Not applicable			Scraping		Present		
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	34	Swim turf	(-100/-107)	Canis familiaris	Ulna	Complete 90%	Dex.	1	19,55	15	Rounding and polishing	Not applicable			Scraping				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	35	Swim turf	(-100/-107)	Canis familiaris	Radius	Complete	Dex.	1	22,26	16	Rounding and polishing	Not applicable			Scraping				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	36	Swim turf	(-100/-107)	Canis familiaris	Vertebrae lumbale IV	Complete 95%		1	10,55	5	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	37	Swim turf	(-100/-107)	Canis familiaris	Vertebrae lumbale VI	Complete 90%		1	9,22	45	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	38	Swim turf	(-100/-107)	Canis familiaris	Vertebrae thoracicae	Complete 95%		1	7,51	65	Polishing	2							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	39	Swim turf	(-100/-107)	Canis familiaris	Ulna	Complete 70%	Dex.	1	12,55	11		2			Scraping				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	40	Swim turf	(-100/-107)	Canis familiaris	Os costae	Complete 70%	Sin.	1	3,99	105	Rounding and polishing	Not applicable							Possible pathology
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	41	Swim turf	(-100/-107)	Unidentified		Fragment		1	7,3	65	Polishing	Not applicable	Present						
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	42	Swim turf	(-100/-107)	Canis familiaris	Vertebrae thoracicae	Complete 95%		1	4,49	55	Polishing	1							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	43	Swim turf	(-100/-107)	Canis familiaris	Vertebrae lumbale V	Complete 95%		1	11,02	65	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	44	Swim turf	(-100/-107)	Canis familiaris	Os scapulae	Complete 50% (distal)	Dex.	1	14,25	8	Polishing	Not applicable			Scraping				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	45	Swim turf	(-100/-107)	Canis familiaris	Vertebrae lumbale III	Complete 80%		1	9,21	45	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	46	Swim turf	(-100/-107)	Canis familiaris	Os baculum	Complete		1	5,11	10	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	47	Swim turf	(-100/-107)	Canis familiaris	Metacarpal IV	Complete	Dex.	1	3,2	7	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	48	Swim turf	(-100/-107)	Canis familiaris	Vertebrae cervicale VI	Complete 98%		1	8,51	45	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	49	Swim turf	(-100/-107)	Canis familiaris	Vertebrae cervicale VII	Complete		1	6,77	5	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	50	Swim turf	(-100/-107)	Canis familiaris	Metacarpal V	Complete	Dex.	1	3,06	6	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	51	Swim turf	(-100/-107)	Unidentified		Fragment		1	3,19	35		3							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	52	Swim turf	(-100/-107)	Canis familiaris	Os costae	Complete 60%	Dex.	1	2,55	7		2							Possible pathology
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	53	Swim turf	(-100/-107)	Unidentified		Fragment		1	2,91	75	Polishing	2	Present				Present		
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	54	Swim turf	(-100/-107)	Canis familiaris	Os costae	Complete 40%	Dex.	1	2,66	8	Polishing	2			Cut				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	55	Swim turf	(-100/-107)	Canis familiaris	Os costae	Complete 50%	Sin.	1	2,54	75	Polishing	Not applicable			Scraping				
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	56 & 64	Swim turf	(-100/-107)	Canis familiaris	Dens	C+		2	2,81	45	Polishing	2							Number 56 and 64 are glued together
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	57	Swim turf	(-100/-107)	Canis familiaris	Os costae	Complete 80%	Dex.	1	1,75	5	Polishing	2	Present						
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	58	Swim turf	(-100/-107)	Canis familiaris	Os costae	Corpus costae 20%		1	1,44	45		2	Present						
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	59	Swim turf	(-100/-107)	Canis familiaris	Os costae	Fragment (ventral)		1	1,62	7		2							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	60	Swim turf	(-100/-107)	Canis familiaris	Os costae	Corpus costae 30%		1	2,21	65		2							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	61	Swim turf	(-100/-107)	Canis familiaris	Os costae	Corpus costae 40%		1	1,57	5		2							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	61	Swim turf	(-100/-107)	Canis familiaris	Os costae	Corpus costae 40%		1	1,54	5		2	Present						
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	62	Swim turf	(-100/-107)	Unidentified		Fragment		1	0,81	35		2							
31433	Flooded	N	x=+1, y=+4 (partly +3)	19	63	Swim turf	(-100/-107)	Unidentified		Fragment		1	0,82	5	Polishing	1							
31433	Flooded	N	x=+1, y=+4	19	65	Swim turf	(-100/-107)	Ovis aries	Metatarsus	Complete 50% (prox.)	Dex.	1	7,08	65		3							
31433	Flooded	N	x=+1, y=+4	19	66	Clayey gravel (bottom)	65-	Ovis aries	Metatarsus	Compelte 50% (dist.)	Dex.	1	4,7	5		3							
31433	Flooded	N	x=+1, y=+5	20	1	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	0,87	2		4		Pitting	Chop				
31433	Flooded	N	x=+1, y=+5	20	2	Swim turf	25-35	Unidentified		Fragment		1	0,8	3		1							
31433	Flooded	N	x=+1, y=+5	20	3	Swim turf	25-35	Canis familiaris	Metacrapale IV	Complete	Sin.	1	3,19	65		1					Present		
31433	Flooded	N	x=+1, y=+5	20	4	Swim turf	35-45	Unidentified		Fragment		1	0,27	2		2							
31433	Flooded	N	x=+1, y=+5	20	5	Swim turf	35-45	Ovis aries/Capra hircus		Meatus acusticus externus	Dex.	1	0,71	25		1							
31433	Flooded	N	x=+1, y=+5	20	6	Swim turf	35-45	Canis familiaris	Metacarpale III	Complete	Sin.	1	3,35	7	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+5	20	7	Swim turf	35-45	Unidentified		Fragment		1	13,66	8	Rounding and polishing	Not applicable	Present	Gnaw					
31433	Flooded	N	x=+1, y=+5	20	8	Lime mud	45-60	Canis familiaris	Vertebrae thoracicae	Complete 90%		1	5,18	7		1							
31433	Flooded	N	x=+1, y=+5	20	9	Lime mud	45-60	Canis familiaris	Vertebrae thoracicae	Complete		1	7,6	7		1							
31433	Flooded	N	x=+1, y=+5	20	10	Lime mud	45-60	Canis familiaris	Vertebrae thoracicae	Complete 90%		1	4,95	5		1							
31433	Flooded	N	x=+1, y=+5	20	11	Lime mud	45-60	Unidentified		Fragment		1	0,98	2	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+5	20	12	Lime mud	45-60	Unidentified		Fragment		1	1,54	5		1			Cut				
31433	Flooded	N	x=+1, y=+5	20	13	Lime mud	45-60	Unidentified		Fragment		1	1,26	25	Rounding	1							
31433	Flooded	N	x=+1, y=+5	20	14	Lime mud	45-60	Canis familiaris	Metatarsale V	Complete	Sin.	1	1,34	5		1							
31433	Flooded	N	x=+1, y=+5	20	15	Lime mud	45-60	Unidentified		Fragment		1	4,63	3	Rounding and polishing	Not applicable						Present	
31433	Flooded	N	x=+1, y=+5	20	16	Lime mud	45-60	Unidentified		Fragment		1	0,46	2	Polishing	1							
31433	Flooded	N	x=+1, y=+5	20	17	Lime mud	45-60	Canis familiaris	Vertebrae thoracicae	Complete 70%		1	4,56	5		1							
31433	Flooded	N	x=+1, y=+5	20	18	Lime mud	45-60	Unidentified		Fragment		1	0,19	2		1							
31433	Flooded	N	x=+1, y=+5	20	19	Lime mud	45-60	Unidentified		Fragment		1	0,21	1		1							
31433	Flooded	N	x=+1, y=+6	21	2	Lime mud	45-60	Unidentified		Fragment		1	0,69	2		1							
31433	Flooded	N	x=+1, y=+6	21	3	Swim turf	25-35	Unidentified		Fragment		1	0,62	2		1							
31433	Flooded	N	x=+1, y=+6	21	4	Swim turf	25-35	Unidentified		Fragment		1	1,07	15		2							
31433	Flooded	N	x=+1, y=+6	21	5	Swim turf	25-35	Ovis aries	Phalanx I	Complete		1	2,14	35		1			Cut				
31433	Flooded	N	x=+1, y=+6	21	6	Swim turf	25-35	Unidentified		Fragment		1	6,47	5	Polishing	Not applicable							
31433	Flooded	N	x=+1, y=+6	21	7	Swim turf	25-35	Canis familiaris	Vertebrae lumbale	Complete 80%		1	10,76	45		1							
31433	Flooded	N	x=+1, y=+6	21	8	Swim turf	45-55	Canis familiaris	Os temporale	Complete 30%	Sin.	1	1,78	4		3							
31433	Flooded	N	x=+1, y=+6	21	9	Swim turf	45-55	Unidentified		Fragment		1	0,37	45		2							
31433	Flooded	N	x=+1, y=+6	21	10	Swim turf	45-55	Canis familiaris	Vertebrae thoracicae	Complete 80%		1	3,96	5		1							
31433	Flooded	N	x=+1, y=+6	21	11	Swim turf	45-55	Unidentified		Fragment		1	2,1	4		1		Gnaw, scraping					
31433	Flooded	N	x=+1, y=+6	21	12	Swim turf	45-55	Canis familiaris	Metatarsale II	Complete	Dex.	1	1,36	5		1							
31433	Flooded	N	x=+1, y=+6	21	13	Swim turf	45-55	Unidentified		Fragment		1	0,82	25		1							
31433	Flooded	N	x=+1, y=+6	21	14 & 15	Lime mud	55-60	Canis familiaris	Metacarpale IV	Complete	Dex.	2	1,76	6		1							Number 14 and 15 are glued together
31433	Flooded	N	x=+1, y=+6	21	16	Lime mud	55-60	Canis familiaris	Tibia	Diafys 90%	Dex.	1	23,59	13	Polishing	Not applicable	Present		Scraping				
31433	Flooded	N	x=+1, y=+6	21	17	Lime mud	55-60	Unidentified		Fragment		1	4,95	10	Rounding and polishing	Not applicable		Pitting					
31433	Flooded	N	x=+1, y=+6	21	18	Lime mud	55-60	Unidentified		Fragment		1	9,24	8	Rounding and polishing	Not applicable		Gnaw, chew					
31433	Flooded	N	x=+1, y=+7	22	1	Lime mud	55-60	Unidentified		Fragment		1	0,55	2	Polishing	1							
31433	Flooded	N	x=+1, y=+7	22	2	Clayey gravel (bottom)	55-	Unidentified		Fragment		1	0,85	3		1		Gnaw	Cut, chop				
31433	Flooded	N	x=+1, y=+7	22	3	Swim turf	25-35	Unidentified		Fragment		1	2,53	4	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+7	22	4	Swim turf	25-35	Sus sp.	Dens	Incisive; crown & neck (complete), root (fragment)		1	2,25	4		2							
31433	Flooded	N	x=+1, y=+7	22	5	Swim turf	25-35	Unidentified		Fragment		1	0,72	25	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+7	22	6	Swim turf	25-35	Unidentified		Fragment		1	0,72	3		1			Cut, chop				
31433	Flooded	N	x=+1, y=+7	22	7	Swim turf	25-35	Ovis aries	Calcaneus	Complete 98%	Dex.	1	3,54	45		2							
31433	Flooded	N	x=+1, y=+7	22	8	Swim turf	25-35	Unidentified		Fragment		1	2,61	35		3					Present		
31433	Flooded	N	x=+1, y=+7	22	9	Swim turf	25-35	Unidentified		Fragment		1	0,37	2		1						Present	
31433	Flooded	N	x=+1, y=+7	22	10	Swim turf	35-45	Unidentified		Fragment		1	0,41	2		3							
31433	Flooded	N	x=+1, y=+7	22	11	Lime mud	45-55	Unidentified		Fragment		1	0,38	2		3							
31433	Flooded	N	x=+1, y=+7	22	12	Lime mud	45-55	Aves	Os coracoideum	Complete 50%		1	0,73	35		1							
31433	Flooded	N	x=+1, y=+7	22	13	Lime mud	45-55	Unidentified		Fragment		1	2,84	4	Rounding and polishing	Not applicable	Present						
31433	Flooded	N	x=+1, y=+7	22	14	Lime mud	45-55	Unidentified		Fragment		1	8	55	Rounding and polishing	Not applicable	Present						
31433	Flooded	N	x=+1, y=+7	22	15	Lime mud	45-55	Unidentified		Fragment		1	1,39	5		1							
31433	Flooded	N	x=+1, y=+7	22	16	Lime mud	45-55	Unidentified		Fragment		1	2,45	45		1	Present						
31433	Flooded	N	x=+1, y=+7	22	17	Lime mud	45-55	Ovis aries/Capra hircus	Vertebrae lumbale	Complete 70%		1	7,09	4	Polishing	1			Scraping				
31433	Flooded	N	x=+1, y=+7	22	18	Lime mud	45-55	Unidentified		Fragment		1	2,29	35	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+7	22	19	Clayey gravel (bottom)	55-	Unidentified		Fragment		1	1,41	35	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+8	23	1	Clayey gravel (bottom)	55-	Unidentified		Fragment		1	0,33	2		3							
31433	Flooded	N	x=+1, y=+8	23	2	Clayey gravel (bottom)	55-	Unidentified		Fragment		1	0,51	25		3							Belongs to number 7
31433	Flooded	N	x=+1, y=+8	23	3	Swim turf	25-35	Unidentified		Fragment		1	1,01	4		4							
31433	Flooded	N	x=+1, y=+8	23	4	Swim turf	25-35	Unidentified		Fragment		1	1,98	3		1							
31433	Flooded	N	x=+1, y=+8	23	5	Swim turf	25-35	Unidentified		Fragment		1	0,51	2		3							
31433	Flooded	N	x=+1, y=+8	23	6	Swim turf	25-35	Unidentified		Fragment		1	6,27	3		Not applicable							Calcified, cancellous bone
31433	Flooded	N	x=+1, y=+8	23	7	Swim turf	25-35	Unidentified		Fragment		1	0,54	25		3							Belongs to number 2
31433	Flooded	N	x=+1, y=+8	23	8	Swim turf	25-35	Unidentified		Fragment		1	2,43	35		1					Present		
31433	Flooded	N	x=+1, y=+8	23	9	Swim turf	25-35	Unidentified		Fragment		1	1,18	45		1			Scraping				
31433	Flooded	N	x=+1, y=+8	23	10	Swim turf	25-35	Unidentified		Fragment		1	3,24	35		3							
31433	Flooded	N	x=+1, y=+8	23	11	Swim turf	25-35	Canis familiaris	Metatarsale IV	Complete 95%	Dex.	1	3,5	6		1							Pathology at the distal part
31433	Flooded	N	x=+1, y=+8	23	12	Swim turf	25-35	Canis familiaris	Os costae	Corpus costae 40%		1	1,14	55		1							
31433	Flooded	N	x=+1, y=+8	23	13	Lime mud	45-55	Bos taurus	Phalanx I	Epiphysis		1	2,66	25		2							
31433	Flooded	N	x=+1, y=+8	23	14	Lime mud	45-55	Unidentified		Fragment		1	1,64	4	Polishing	1	Present				Present		
31433	Flooded	N	x=+1, y=+8	23	15	Lime mud	45-55	Unidentified		Fragment		1	0,56	2		1			Scraping			Present	
31433	Flooded	N	x=+1, y=+9	24	1	Lime mud	45-55	Equus caballus	Phalanx I	Complete		1	45,53	8		3	Present	Scraping	Cut				
31433	Flooded	N	x=+1, y=+9	24	2	Lime mud	45-55	Unidentified		Fragment		1	1,42	25	Rounding	1			Cut, chopped off				
31433	Flooded	N	x=+1, y=+10	25	2	Swim turf	25-50	Unidentified		Fragment		1	0,44	25		3							
31433	Flooded	N	x=+1, y=+10	25	3	Swim turf	25-50	Unidentified		Fragment		1	1,8	25		3							
31433	Flooded	N	x=+1, y=+10	25	4	Swim turf	25-50	Unidentified		Fragment		1	0,22	2		1							
31433	Flooded	N	x=+1, y=+10	25	5	Swim turf	25-50	Unidentified		Fragment		1	1,68	2	Rounding and polishing	Not applicable		Scraping					
31433	Flooded	N	x=+1, y=+10	25	6	Swim turf	25-50	Unidentified		Fragment		1	0,34	25		1							
31433	Flooded	N	x=+1, y=+10	25	7	Swim turf	25-50	Unidentified		Fragment		1	2,16	25		3							
31433	Flooded	N	x=+1, y=+10	25	8	Swim turf	25-50	Unidentified		Fragment		1	0,95	45		1			Cut		Present		
31433	Flooded	N	x=+1, y=+10	25	9	Swim turf	25-50	Unidentified		Fragment		1	1,94	45		3							
31433	Flooded	N	x=+1, y=+10	25	10	Swim turf	25-50	Unidentified		Fragment		1	5,37	8	Rounding and polishing	Not applicable		Chew	Cut				
31433	Flooded	N	x=+1, y=+10	25	11	Swim turf	25-50	Unidentified		Fragment		1	0,64	25		2			Scarping				
31433	Flooded	N	x=+1, y=+10	25	12	Swim turf	25-50	Unidentified		Fragment		1	1,5	35		3							
31433	Flooded	N	x=+1, y=+10	25	13	Swim turf	25-50	Unidentified		Fragment		1	8,71	9	Rounding and polishing	Not applicable	Present		Scraping				
31433	Flooded	N	x=+1, y=+10	25	14	Swim turf	25-50	Canis familiaris	Os zygomaticum	Complete	Dex.	1	4,76	6	Rounding and polishing	Not applicable							
31433	Flooded	N	x=+1, y=+10	25	15	Swim turf	25-50	Equus caballus	Os coxae	Acetabulum (complete 20%)	Dex.	1	5,93	35		3							
31433	Flooded	N	x=+1, y=+10	25	16	Swim turf	25-50	Equus caballus	Os coxae	Acetabulum (complete 30%)	Dex.	1	29,01	8	Rounding	3					Present		
31433	Flooded	N	x=+1, y=+10	25	17	Swim turf	25-50	Equus caballus	Os coxae	Os ichium (complete 70%), acetabulum (complete 50%)	Dex.	1	78,82	15	Rounding	3	Present						
31433	Flooded	N	x=+1, y=+10	25	18	Swim turf	25-50	Unidentified		Fragment		1	1,29	3		1			Chopped off				
31433	Flooded	N	x=+1, y=+10	25	19	Swim turf	25-50	Unidentified		Fragment		1	3,8	55		3							
31433	Flooded	N	x=+1, y=+10	25	20a	Swim turf	25-50	Bos taurus	Astragalus	Complete		1	40,76	6	Rounding and polishing	5							
31433	Flooded	N	x=+1, y=+10	25	20b	Swim turf	25-50	Unidentified		Fragment		1	4,49	55		1	Present						
31433	Flooded	N	x=+1, y=+10	25	21	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	3,14	45	Rounding and polishing	Not applicable		Pitting	Cut				
31433	Flooded	N	x=+1, y=+10	25	22	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	7,48	5	Rounding and polishing	Not applicable	Present		Scraping				
31433	Flooded	N	x=+1, y=+10	25	23	Clayey gravel (bottom)	65-	Bos taurus	Dens	Fragment		1	5,96	35		Not applicable							
31433	Flooded	N	x=+1, y=+10	25	24	Clayey gravel (bottom)	65-	Bos taurus	Dens	Fragment		1	6,04	35		Not applicable							
31433	Flooded	N	x=+1, y=+11	26	1	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	0,68	2	Polishing	1							
31433	Flooded	N	x=+1, y=+11	26	2	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	0,52	2		3							
31433	Flooded	N	x=+1, y=+11	26	3	Swim turf	25-55	Unidentified		Fragment		1	1,59	35		1	Present		Scraping				
31433	Flooded	N	x=+1, y=+11	26	4	Swim turf	25-55	Unidentified		Fragment		1	0,55	2	Polishing	1							
31433	Flooded	N	x=+1, y=+11	26	5	Swim turf	25-55	Unidentified		Fragment		1	1,75	25	Polishing	1	Present	Scraping	Scraping				
31433	Flooded	N	x=+1, y=+11	26	6	Swim turf	25-55	Unidentified		Fragment		1	4,33	65	Rounding and polishing	Not applicable							Disturbed surface
31433	Flooded	N	x=+1, y=+11	26	7	Swim turf	25-55	Canis familiaris	Cranium	Condylus occipitale	Dex.	1	2,41	25	Polishing	Not applicable							

LUHM	Area	Zone	Coordinates	Square nr.	Find nr.	Layer	Depth (cm)	Species	Element	Part	Side	Quantity	Weight (g)	Measurment (mm)	Abrasion	Weathering (Boethius)	Trampling	Gnaw-marks	Butchery-marks	Marrow split	Root etched	Recent damage	Notes
31433	Flooded	N	x=+1, y=+11	26	8	Swim turf	25-55	Equus caballus	Dens	i2-	Sin.	1	9,1	65		3							
31433	Flooded	N	x=+1, y=+11	26	9	Swim turf	25-55	Canis familiaris	Vertebrae thoracicae	Complete 70%		1	6,16	4	Polishing	3							
31433	Flooded	N	x=+1, y=+11	26	10	Swim turf	25-55	Equus caballus	Femur	Diafys (complete 40%)	Sin.	1	85,27	12	Rounding	4							
31433	Flooded	N	x=+1, y=+11	26	11	Swim turf	25-55	Unidentified		Fragment		1	11,65	6		Not applicable							
31433	Flooded	N	x=+1, y=+11	26	12	Swim turf	25-55	Unidentified		Fragment		1	4,07	35		4							
31433	Flooded	N	x=+1, y=+11	26	13	Swim turf	25-55	Canis familiaris	Calcaneus	Complete	Dex.	1	2,65	4		2							
31433	Flooded	N	x=+1, y=+11	26	14	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	0,93	25	Rounding	1							
31433	Flooded	N	x=+1, y=+11	26	15	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	2,35	55	Polishing	3		Pitting, scraping	Cut				
31433	Flooded	N	x=+1, y=+12	27	1	Lime mud	55-65	Canis familiaris	Os coxae	Acetabulum (complete 45%), os ichium (complete 20%)	Sin.	1	4,83	4	Rounding and polishing	Not applicable		Gnaw, scraping					
31433	Flooded	N	x=+1, y=+12	27	2	Lime mud	55-65	Unidentified		Fragment		1	3,53	45		1							
31433	Flooded	N	x=+1, y=+12	27	3	Swim turf	25-55	Unidentified		Fragment		1	9,68	4		4	Present						
31433	Flooded	N	x=+1, y=+12	27	4	Lime mud	55-65	Unidentified		Fragment		1	3,92	3		4							
31433	Flooded	N	x=+1, y=+12	27	5	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	5,05	35		3			Chopped off				
31433	Flooded	N	x=+1, y=+13	28	1	Clayey gravel (bottom)	60-	Unidentified		Fragment		1	28,64	10	Rounding	4			Cut				
31433	Flooded	N	x=+1, y=+13	28	2	Clayey gravel (bottom)	60-	Ovis aries	Radius	Diafys (complete 80%)		1	23,65	115		3		Gnaw, chew, scraping			Present		
31433	Flooded	N	x=+1, y=+13	28	3	Lime mud	55-65	Canis familiaris	Os mandibulae + dens	Mandibula (fragment), p3-	Dex.	1	7,88	7	Rounding and polishing	Not applicable		Gnaw	Cut				
31433	Flooded	N	x=+1, y=+13	28	4	Lime mud	55-65	Canis familiaris	Os mandibulae	Fragment	Dex.	1	2,74	5	Rounding and polishing	Not applicable							Belongs to number 3
31433	Flooded	N	x=+1, y=+13	28	5	Clayey gravel (bottom)	65-	Unidentified		Fragment		1	2,18	3		3							
31433	Flooded	N	x=+1, y=+14	29	1	Clayey gravel (bottom)	50-	Unidentified		Fragment		1	2,28	35	Rounding	3							
31433	Outside	N	x=+1, y=+15	30	1	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	4,79	25		3							
31433	Outside	N	x=+1, y=+15	30	2	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	11,45	65	Rounding and polishing	Not applicable							Disturbed surface
31433	Outside	N	x=+1, y=+15	30	3	Sand	25-30	Unidentified		Fragment		1	1,23	25	Rounding and polishing	Not applicable							
31433	Outside	N	x=+1, y=+16	31	1	Sand	25-30	Unidentified		Fragment		1	0,36	2		3							
31433	Outside	N	x=+1, y=+16	31	2	Sand	25-30	Bos taurus	Dens	p3-	Dex.	1	3,93	35		3							
31433	Outside	N	x=+1, y=+17	32	1	Swim turf	25-30	Unidentified		Fragment		1	0,41	25		2							
31433	Outside	N	x=+1, y=+17	32	2	Swim turf	25-30	Unidentified		Fragment		1	7,95	55	Rounding and polishing	Not applicable	Present		Cut				
31433	Outside	N	x=+1, y=+17	32	4	Swim turf	25-30	Unidentified		Fragment		1	28,18	16	Rounding and polishing	Not applicable							
31433	Outside	N	x=+1, y=+17	32	5	Swim turf	25-30	Unidentified		Fragment		1	0,54	25	Rounding and polishing	Not applicable							
31433	Outside	N	x=+1, y=+18	33	1	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	16,11	8	Rounding and polishing	Not applicable	Present						
31433	Outside	N	x=+1, y=+18	33	2	Sandy gravel (bottom)	50-	Bos taurus	Dens	m2-	Dex.	1	17,07	45		3							
31433	Outside	N	x=+1, y=+19	34	1	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	4,52	65	Rounding and polishing	Not applicable	Present	Gnaw					
31433	Outside	N	x=+1, y=+19	34	2	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	24,73	12	Rounding and polishing	3	Present					Present	
31433	Outside	N	x=+1, y=+19	34	3	Sand	45-50	Unidentified		Fragment		1	7,72	65	Rounding and polishing	Not applicable							Disturbed surface
31433	Outside	N	x=+1, y=+20	35	1	Sandy gravel (bottom)	50-	Bos taurus	Metatarsus	Diafys (complete 30%)		1	35,65	7	Rounding and polishing	Not applicable							Disturbed surface
31433	Hollow	S	x=-4, y=-10	2	1, 7, 8 & 11	Grey mud	50-60	Ovis aries	Cranium	Foramen orbita, os zygomaticum, ossa frontale, ossa temporale, os occipitale, condylus occipitale & os maxillare (sin. & dex.), os nasale (sin.); p2+, p3+, p4+, m1+, m2+ & m3+ (sin. & dex.)	Sin. & dex.	4	171,16	215		2			Cut				Number 1, 7, 8, and 11 have been glued together
31433	Hollow	S	x=-4, y=-10	2	2 & 10	Grey mud	50-60	Ovis aries	Cranium	Ossa frontale, ossa parietale, ossa temporale, os occipitale (sin. & dex.), os maxillare & os zygomaticum (sin.); dp4+, m1+, m2+ & m3+ (sin.)	Sin. & dex.	2	108,48	165		2							Number 2 and 10 have been glued together
31433	Hollow	S	x=-4, y=-10	2	3 & 12	Grey mud	50-60	Ovis aries	Os mandibulae + dens	Mandibula (sin & dex.); p2-, p3-, m1-, m2- & m3- (dex.), p3-, p4-, m1-, m2- & m3- (sin.)	Sin. & dex.	2	95,85	165		2	Present						Number 3 and 12 have been glued together
31433	Hollow	S	x=-4, y=-10	2	4	Grey mud	50-60	Ovis aries	Metatarsus	Complete	Dex.	1	17,9	135		1	Present		Cut				
31433	Hollow	S	x=-4, y=-10	2	5	Grey mud	50-60	Ovis aries	Metacarpus	Complete	Sin.	1	14,7	125		1	Present						
31433	Hollow	S	x=-4, y=-10	2	6	Grey mud	50-60	Ovis aries	Metatarsus	Complete (without dist. epiphysis)	Dex.	1	14,57	115		2			Cut			Present	
31433	Hollow	S	x=-4, y=-10	2	9 & 45	Grey mud	50-60	Ovis aries	Os mandibulae + dens	Mandibula (sin. & dex.); i1-, dp3-, dp4-, m1- & m2- (sin.), i1-, dp4-, m1- & m2- (dex.)	Sin. & dex.	2	68,48	140		2	Present		Cut				Number 9 and 45 have been glued together
31433	Hollow	S	x=-4, y=-10	2	13	Grey mud	50-60	Ovis aries	Phalanx I	Complete		1	2,16	35		1							
31433	Hollow	S	x=-4, y=-10	2	14	Grey mud	40-50	Ovis aries/Capra hircus	Os costae	Capitulum costae, corpus costae 80%	Sin.	1	2,16	120		3							
31433	Hollow	S	x=-4, y=-10	2	15	Grey mud	40-50	Unidentified		Fragment		1	4,54	105		3						Present	
31433	Hollow	S	x=-4, y=-10	2	16	Grey mud	40-50	Ovis aries/Capra hircus	Os costae	Capitulum costae, corpus costae 60%	Sin.	1	3,4	110		4			Cut				
31433	Hollow	S	x=-4, y=-10	2	17	Grey mud	40-50	Ovis aries/Capra hircus	Os costae	Capitulum costae, corpus costae 50%		1	4,11	120		4			Cut				
31433	Hollow	S	x=-4, y=-10	2	18	Grey mud	40-50	Unidentified		Fragment	Sin.	1	1,88	95		4							
31433	Hollow	S	x=-4, y=-10	2	19	Grey mud	40-50	Ovis aries/Capra hircus	Os costae	Corpus costae 95%		1	1,58	100		3							
31433	Hollow	S	x=-4, y=-10	2	20	Grey mud	40-50	Ovis aries/Capra hircus	Os costae	Corpus costae 60%		1	2,37	90		4							
31433	Hollow	S	x=-4, y=-10	2	21	Grey mud	40-50	Ovis aries/Capra hircus	Os incisivum	Fragment	Sin.	1	1,47	60		2							
31433	Hollow	S	x=-4, y=-10	2	22	Grey mud	40-50	Unidentified		Fragment		1	0,97	60		1							
31433	Hollow	S	x=-4, y=-10	2	23	Grey mud	40-50	Ovis aries/Capra hircus	Os costae	Fragment	Sin.	1	3,77	95		1	Present						
31433	Hollow	S	x=-4, y=-10	2	24	Grey mud	40-50	Ovis aries/Capra hircus	Os costae	Complete 98%	Dex.	1	2,78	145		2							
31433	Hollow	S	x=-4, y=-10	2	25	Grey mud	40-50	Unidentified		Fragment		1	1,3	65		4			Cut				
31433	Hollow	S	x=-4, y=-10	2	26	Grey mud	40-50	Unidentified		Fragment		1	1,04	60		4			Cut				
31433	Hollow	S	x=-4, y=-10	2	27	Grey mud	40-50	Ovis aries/Capra hircus	Vertebrae thoracicae	Complete 95%		1	6,88	80		1							
31433	Hollow	S	x=-4, y=-10	2	28	Grey mud	40-50	Ovis aries	Os maxillare + dens	Maxilla (complete); dp2+, dp3+, m1+ & m2+	Sin.	1	17,74	70		3							
31433	Hollow	S	x=-4, y=-10	2	29	Grey mud	40-50	Unidentified		Fragmen		1	1,74	75		4							
31433	Hollow	S	x=-4, y=-10	2	30	Grey mud	40-50	Ovis aries	Cranium	Os zygomticum, Os temporale 5%, tuberculum articulare	Sin.	1	2,3	45		2							
31433	Hollow	S	x=-4, y=-10	2	31	Grey mud	40-50	Ovis aries/capra hircus	Sternum	Fragment		1	1,74	25		1							
31433	Hollow	S	x=-4, y=-10	2	32	Grey mud	40-50	Ovis aries	Calcaneus	Complete	Dex.	1	4,36	50		1							
31433	Hollow	S	x=-4, y=-10	2	33	Grey mud	40-50	Ovis aries	Femur	Epiphysis (dist.)	Dex.	1	6,85	40		3							
31433	Hollow	S	x=-4, y=-10	2	34	Grey mud	40-50	Ovis aries/Capra hircus	Vertebrae lumbale V	Complete 85%		1	5,82	50		1							
31433	Hollow	S	x=-4, y=-10	2	35	Grey mud	40-50	Ovis aries	Cranium	Condylus occipitale, basi occipitale		1	7,42	55		3							
31433	Hollow	S	x=-4, y=-10	2	36	Grey mud	40-50	Ovis aries/Capra hircus	Vertebrae lumbale	Complete 90%		1	4,8	35		3							
31433	Hollow	S	x=-4, y=-10	2	37	Grey mud	40-50	Ovis aries/Capra hircus	Vertebrae lumbale	Complete 80%		1	6,22	55		3							
31433	Hollow	S	x=-4, y=-10	2	38	Grey mud	40-50	Ovis aries/Capra hircus	Vertebrae lumbale	Complete 80%		1	4,02	35		1					Present		
31433	Hollow	S	x=-4, y=-10	2	39	Grey mud	40-50	Ovis aries	Humerus	Diaphys 30% (prox.)	Sin.	1	13,14	65		2			Blow	Yes			
31433	Hollow	S	x=-4, y=-10	2	40	Grey mud	40-50	Ovis aries	Metacapus	Complete (missing dist. epiphysis)	Dex.	1	12,95	105		2			Cut				
31433	Hollow	S	x=-4, y=-10	2	41	Grey mud	40-50	Ovis aries/Capra hircus	Vertebrae cervicale	Complete 90%		1	4,91	35		1							
31433	Hollow	S	x=-4, y=-10	2	42	Grey mud	40-50	Ovis aries	Humerus	Complete (missing prox. epiphysis)	Sin.	1	23,06	110		3			Cut				
31433	Hollow	S	x=-4, y=-10	2	43	Grey mud	40-50	Ovis aries	Metatarsus	Complete	Sin.	1	17,42	135		2						Present	
31433	Hollow	S	x=-4, y=-10	2	44	Grey mud	40-50	Ovis aries	Metatarsus	Complete	Sin.	1	16,77	125		2							
31433	Hollow	S	x=-4, y=-10	2	46	Grey mud	40-50	Unidentified		Fragment		1	0,68	60		1							
31433	Hollow	S	x=-4, y=-10	2	47	Grey mud	40-50	Ovis aries	Pars petrosa	Complete		1	2,11	25		1							
31433	Hollow	S	x=-4, y=-10	2	48	Grey mud	40-50	Unidentified		Fragment		1	12,89	80		1			Chop, blow	Yes			
31433	Hollow	S	x=-4, y=-10	2	49	Grey mud	40-50	Unidentified		Fragment		1	0,16	25		1							
31433	Hollow	S	x=-4, y=-10	2	50	Grey mud	40-50	Unidentified		Fragment		1	1,36	25		1							
31433	Hollow	S	x=-4, y=-10	2	51	Grey mud	40-50	Unidentified		Fragment		1	1,74	30		1							
31433	Hollow	S	x=-4, y=-10	2	52	Grey mud	40-50	Ovis aries	Metapod	Epiphysis (dist.)		1	2,23	20		2							
31433	Hollow	S	x=-4, y=-10	2	54	Grey mud	60-70	Ovis aries/Capra hircus	Vertebrae lumbale	Complete 95%		1	10,83	80		1							
31433	Hollow	S	x=-4, y=-10	2	55	Grey mud	60-70	Ovis aries	Metacarpus	Complete	Dex.	1	15,72	125		1						Present	
31433	Hollow	S	x=-4, y=-10	2	56	Sand (bottom)	100-	Ovis aries/Capra hircus	Centrotarsale IV+V	Complete	Sin.	1	2,58	20		1							
31433	Hollow	S	x=-4, y=-7	5	1	Humus	(115 to 125)	Equus caballus	Phalanx I	Complete		1	81,98	85		1							
31433	Hollow	S	x=-4, y=-7	5	2	Humus	(115 to 125)	Equus caballus	Phalanx I	Complete		1	67,37	75		1							
31433	Hollow	S	x=-4, y=-7	5	3	Humus	(115 to 125)	Equus caballus	Phalanx II	Complete		1	35,23	50		1							
31433	Hollow	S	x=-4, y=-7	5	4	Humus	(115 to 125)	Equus caballus	Os tarsi tertium	Complete	Dex.	1	16,16	45		1							
31433	Hollow	S	x=-4, y=-7	5	5	Humus	(115 to 125)	Equus caballus	Phalanx III	Complete		1	36,75	70		1							
31433	Hollow	S	x=-4, y=-7	5	6	Humus	(115 to 125)	Equus caballus	Phalanx III	Complete		1	34,18	70		1							
31433	Hollow	S	x=-4, y=-7	5	7	Humus	(115 to 125)	Equus caballus	Phalanx II	Complete		1	35,86	50		1							
31433	Hollow	S	x=-4, y=-7	5	8	Humus	(115 to 125)	Equus caballus	Phalanx I	Complete		1	63,93	80		1							
31433	Hollow	S	x=-4, y=-7	5	9	Humus	(115 to 125)	Equus caballus	Metatarsal II	Complete	Dex.	1	10,55	155		1							
31433	Hollow	S	x=-4, y=-7	5	10	Humus	(115 to 125)	Equus caballus	Os sesamoideum	Complete		1	3,27	45		1							
31433	Hollow	S	x=-4, y=-7	5	10a	Peat	Ca. 70	Unidentified		Fragment		1	8,61	90		2		Scraping	Chop			Present	
31433	Hollow	S	x=-4, y=-7	5	10b	Peat	Ca. 70	Unidentified		Fragment		1	4,92	100		2						Present	
31433	Hollow	S	x=-4, y=-7	5	11	Peat	Ca. 70	Canis familiaris	Os maxillare + dens	p4+, m1+ & m2+	Sin.	1	25,46	100		2	Present						
31433	Hollow	S	x=-4, y=-7	5	12	Peat	Ca. 70	Unidentified		Fragment		1	19,1	80		2			Chop, cruching				
31433	Hollow	S	x=-4, y=-7	5	13	Peat or peat mud	75-115	Bos taurus	Humerus	Fragment (dist.)	Sin.	1	194,3	210		2			Chop, cut, blow				
31433	Hollow	S	x=-4, y=-7	5	14	Peat or peat mud	75-115	Bos taurus	Vertebrae thoracicae	Fragment		1	15,73	100		1		Pitting, scraping	Chop, blow				
31433	Hollow	S	x=-4, y=-7	5	15	Peat or peat mud	75-115	Bos taurus	Vertebrae cervicale	Fragment		1	16,14	65		1			Chop				
31433	Hollow	S	x=-4, y=-7	5	16	Peat or peat mud	75-115	Unidentified		Fragment		1	17,89	120		1			Blow	Yes			
31433	Hollow	S	x=-4, y=-7	5	17	Peat or peat mud	75-115	Equus caballus	Os sesamoideum	Complete		1	9,37	30		2							
31433	Hollow	S	x=-4, y=-7	5	18	Peat or peat mud	75-115	Bos taurus	Os scapulae	Fragment		1	30,98	115		2			Blow				
31433	Hollow	S	x=-4, y=-7	5	19	Peat or peat mud	75-115	Unidentified		Fragment		1	22,3	130		1			Chop				
31433	Hollow	S	x=-4, y=-7	5	20	Peat or peat mud	75-115	Unidentified		Fragment		1	17,65	140		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	21	Peat or peat mud	75-115	Bos taurus	Os scapulae	Spina scapulae (fragment)		1	18,18	110		1			Chop	Yes			
31433	Hollow	S	x=-4, y=-7	5	22	Peat or peat mud	75-115	Unidentified		Fragment		1	25,42	120		1		Gnaw	Blow				
31433	Hollow	S	x=-4, y=-7	5	23	Peat or peat mud	75-115	Unidentified		Frament		1	12,74	90		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	24	Peat or peat mud	75-115	Bos taurus	Radius	Diafys (complete 40%)	Dex.	1	48,39	165		2			Blow	Yes			
31433	Hollow	S	x=-4, y=-7	5	25	Peat or peat mud	75-115	Unidentified		Fragment		1	20,22	115		2			Chop, blow				
31433	Hollow	S	x=-4, y=-7	5	26	Peat or peat mud	75-115	Bos taurus	Phalanx I	Complete		1	29,06	60		1							
31433	Hollow	S	x=-4, y=-7	5	27	Peat or peat mud	75-115	Bos taurus	Vertebrae cervecale	Fragment		1	13,82	60		2			Blow				
31433	Hollow	S	x=-4, y=-7	5	28	Peat or peat mud	75-115	Bos taurus	Os costae	Corpus costae 70%	Sin.	1	16,78	110		1			Chop				
31433	Hollow	S	x=-4, y=-7	5	29	Peat or peat mud	75-115	Unidentified		Fragment		1	11,44	95		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	30	Peat or peat mud	75-115	Unidentified		Fragment		1	18,06	135		1			Chop				
31433	Hollow	S	x=-4, y=-7	5	31	Peat or peat mud	75-115	Bos taurus	Atlas	Fragmented		1	50,11	80		2			Chop, cut, blow			Present	
31433	Hollow	S	x=-4, y=-7	5	32	Peat or peat mud	75-115	Unidentified		Fragment		1	19,11	120		1			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	33	Peat or peat mud	75-115	Unidentified		Fragment		1	13,58	105		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	34	Peat or peat mud	75-115	Unidentified		Fragmetn		1	16,83	115		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	35	Peat or peat mud	75-115	Unidentified		Fragment		1	27,29	155		1			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	36	Peat or peat mud	75-115	Unidentified		Fragment		1	11,86	85		2		Pitting	Chopped off				
31433	Hollow	S	x=-4, y=-7	5	37	Peat or peat mud	75-115	Unidentified		Fragment		1	14,05	85		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	38	Peat or peat mud	75-115	Unidentified		Fragment		1	6,89	80		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	39	Peat or peat mud	75-115	Bos taurus	Humerus	Diafys (complete 30%)	Dex.	1	59,82	150		3			Chop, blow	Yes			
31433	Hollow	S	x=-4, y=-7	5	40	Peat or peat mud	75-115	Bos taurus	Os costae	Corpus costae 80%		1	37,28	165		2			Chop, cut				
31433	Hollow	S	x=-4, y=-7	5	41	Peat or peat mud	75-115	Bos taurus	Os costae	Corpus costae 40%		1	24,43	130		1	Present		Blow, chopped off				
31433	Hollow	S	x=-4, y=-7	5	42	Peat or peat mud	75-115	Unidentified		Fragment		1	22,47	165		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	43	Peat or peat mud	75-115	Unidentified		Fragment		1	15,54	75		1			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	44	Peat or peat mud	75-115	Bos taurus	Vertebrae lumbale	Proc. transversus & facies articularis cranialt	Dex.	1	20,08	100		1	present		Chop, cut				
31433	Hollow	S	x=-4, y=-7	5	45	Peat or peat mud	75-115	Unidentified		Fragment		1	6,49	95		2			Cut, blow	Yes			
31433	Hollow	S	x=-4, y=-7	5	46	Peat or peat mud	75-115	Unidentified		Fragment		1	12,19	75		1			Blow				
31433	Hollow	S	x=-4, y=-7	5	47	Peat or peat mud	75-115	Bos taurus	Os scapulae	Fragment		1	34,58	85		1			Chop, blow				
31433	Hollow	S	x=-4, y=-7	5	48	Peat or peat mud	75-115	Unidentified		Fragment		1	8,26	75		3			Blow				
31433	Hollow	S	x=-4, y=-7	5	49	Peat or peat mud	75-115	Unidentified		Fragment		1	15,16	110		1			Chop				
31433	Hollow	S	x=-4, y=-7	5	50	Peat or peat mud	75-115	Unidentified		Fragment		1	11,53	80		2			Cut, chopped off				
31433	Hollow	S	x=-4, y=-7	5	51	Peat or peat mud	75-115	Unidentified		Fragment		1	10,28	85		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	52	Peat or peat mud	75-115	Unidentified		Fragment		1	13,28	105		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	53	Peat or peat mud	75-115	Unidentified		Fragment		1	8,03	80		2			Cut, chopped off				
31433	Hollow	S	x=-4, y=-7	5	54	Peat or peat mud	75-115	Unidentified		Fragment		1	14,39	100		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	55	Peat or peat mud	75-115	Unidentified		Fragment		1	15,24	100		2			Cut				
31433	Hollow	S	x=-4, y=-7	5	56	Peat or peat mud	75-115	Unidentified		Fragment		1	17,74	120		2		Scraping	Chopped off				
31433	Hollow	S	x=-4, y=-7	5	57	Peat or peat mud	75-115	Unidentified		Fragment		1	5,28	65		2		Gnaw	Chopped off				
31433	Hollow	S	x=-4, y=-7	5	58	Peat or peat mud	75-115	Unidentified		Fragment		1	14,79	110		2			Chop, chopped off				
31433	Hollow	S	x=-4, y=-7	5	59	Peat or peat mud	75-115	Unidentified		Fragment		1	14,01	105		2			Chop, cut, scraping				
31433	Hollow	S	x=-4, y=-7	5	60	Peat or peat mud	75-115	Unidentified		Fragment		1	11,89	135		1			Blow, cut				
31433	Hollow	S	x=-4, y=-7	5	61	Peat or peat mud	75-115	Unidentified		Fragment		1	11,98	90		1			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	62	Peat or peat mud	75-115	Unidentified		Fragment		1	9,38	75		1		Scraping	Chopped off				
31433	Hollow	S	x=-4, y=-7	5	63	Peat or peat mud	75-115	Unidentified		Fragment		1	13,47	60		2			Cut				Marked 65, but Møhl changed it to 63
31433	Hollow	S	x=-4, y=-7	5	64	Peat or peat mud	75-115	Unidentified		Fragment		1	7,9	90		3		Puncture, pitting					
31433	Hollow	S	x=-4, y=-7	5	65	Peat or peat mud	75-115	Unidentified		Fragment		1	8,97	75		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	66	Peat or peat mud	75-115	Unidentified		Fragment		1	15,04	110		2			Chopped off				
31433	Hollow	S	x=-4, y=-7	5	67	Peat or peat mud	75-115	Bos taurus	Axis	Dens axis (complete 45%)		1	24,66	70		2			Chop				
31433	Hollow	S	x=-4, y=-7	5	68	Peat or peat mud	75-115	Bos taurus	Radius	Epiphysis (dist.)	Dex.	1	17,15	60		3							
31433	Hollow	S	x=-4, y=-7	5	69	Peat or peat mud	75-115	Bos taurus	Vertebrae lumbale	Spina vetebrae & facies articularis cranialt	?	1	22,33	115		2	Present		Chop, cut				
31433	Hollow	S	x=-4, y=-7	5	70	Peat or peat mud	75-115	Unidentified		Fragment		1	5,91	85		3			Chop				
31433	Hollow	S	x=-4, y=-7	5	71	Peat or peat mud	75-115	Bos taurus	Phalanx III	Complete		1	15,16	60		3							
31433	Hollow	S	x=-4, y=-7	5	72	Peat or peat mud	75-115	Unidentified		Fragment		1	8,41	45		1			Blow	Yes			
31433	Hollow	S	x=-4, y=-7	5	73	Peat or peat mud	75-115	Unidentified		Fragment		1	1,65	45		1		Pitting					
31433	Hollow	S	x=-4, y=-7	5	74	Peat or peat mud	75-115	Unidentified		Fragment		1	4,71	60		2		Scraping	Chopped off				
31433	Hollow	S	x=-4, y=-7	5	75	Peat or peat mud	75-115	Unidentified		Fragment		1	14,88	100		1			Chop				
31433	Hollow	S	x=-4, y=-7	5	76	Peat or peat mud	75-115	Unidentified		Fragment		1	2,09	75		2							
31433	Hollow	S	x=-4, y=-7	5	77	Peat or peat mud	75-115	Unidentified		Fragment		1	7,08	100		2		Gnaw, pitting					
31433	Hollow	S	x=-4, y=-7	5	78	Peat or peat mud	75-115	Bos taurus	Os scapulae	Fragment		1	11,59	120		3							
31433	Hollow	S	x=-4, y=-7	5	79	Peat or peat mud	75-115	Unidentified		Fragment		1	12,14	50		1						Present	
31433	Hollow	S	x=-4, y=-7	5	80	Peat or peat mud	75-115	Unidentified		Fragment		1	2,89	50		1							
31433	Hollow	S	x=-4, y=-7	5	81	Peat or peat mud	75-115	Unidentified		Fragment		1	0,98	35		1							
31433	Hollow	S	x=-4, y=-7	5	82	Peat or peat mud	75-115	Unidentified		Fragment		1	1,16	45		1							
31433	Hollow	S	x=-4, y=-7	5	83	Peat or peat mud	75-115	Bos taurus	Radius + Ulna	Epiphysis (dist.)	Sin.	1	47,76	80		2							
31433	Hollow	S	x=-4, y=-7	5	84	Peat or peat mud	75-115	Bos taurus	Radius	Fragment	Sin.	1	12,13	45		3						Present	
31433	Hollow	S	x=-4, y=-7	5	85	Peat or peat mud	75-115	Unidentified		Fragment		1	1,86	20		3							
31433	Hollow	S	x=-4, y=-7	5	86	Sand (bottom)	140-	Sus sp.	Vertebrae thoracicae	Complete 80%		1	6,61	40		1							
31433	Hollow	S	x=-4, y=-7	5	87	Sand (bottom)	140-	Equus caballus	Phalanx II	Complete		1	40,88	50		1			Scraping				
31433	Hollow	S	x=-4, y=-7	5	88	Sand (bottom)	140-	Bos taurus	Os mandibulae	Corpus mandibulae (compelte 20%); M2- & M3-	Sin.	1	74,7	95		1			Chop, blow				
31433	Hollow	S	x=-4, y=-7	5	89	Sand (bottom)	140-	Equus caballus	Phalanx II	Complete		1	33,62	45		1							
31433	Hollow	S	x=-4, y=-7	5	90	Sand (bottom)	140-	Equus caballus	Phalanx I	Complete		1	71,01	75		1							
31433	Hollow	S	x=-4, y=-4	72	1	Sand	100-125	Equus caballus	Dens	p4-	Sin.	1	31,76	65		2							
31433	Hollow	S	x=-4, y=-4	72	2	Sand	100-125	Equus caballus	Os costae	Corpus costae 80%		1	24,39	230		2	Present		Cut				
31433	Hollow	S	x=-4, y=-4	72	3	Sand	100-125	Unidentified		Fragment		1	5,04	75		3							Disturbed surface
31433	Hollow	S	x=-4, y=-4	72	4	Sand	100-125	Canis familiaris	Vertebrae lumbale	Complete 93%		1	9,15	45		2			Chop				
31433	Hollow	S	x=-4, y=-4	72	5, 6 & 8	Grey mud	125-Bottom	Ovis aries	Cranium	Ossa frontale, ossa parietale, ossa temporale, os occipitale, os maxillare (sin. & dex.), os zygomaticum (dex.); p2+, p3+, p4+, m1+ m2+ & m3+ (sin.), p2+, p3+, p4+, m1+, m2+ & m3+ (dex.)	Sin. & dex.	3	146,72	180		3			Scraping				Number 5, 6 & 8 have been glued together
31433	Hollow	S	x=-4, y=-4	72	7	Grey mud	125-Bottom	Unidentified		Fragment		1	11,92	80		1	Present		Chooped off				
31433	Hollow	S	x=-4, y=-4	72	9	Grey mud	125-Bottom	Equus caballus	Phalanx II	Complete		1	26,63	45		2			Chop				
31433	Hollow	S	x=-4, y=-5	73	1	Disturbed by plough	0-20	Equus caballus	Os scapulae	Complete 70%	Dex.	1	258,02	305		2	Present	Pitting	Cut				
31433	Hollow	S	x=-4, y=-5	73	2	Disturbed by plough	0-20	Equus caballus	Tibia	Complete	Dex.	1	237,44	350		1		Scraping	Cut, scraping				
31433	Hollow	S	x=-4, y=-5	73	3	Disturbed by plough	0-20	Equus caballus	Vertebrae cervicale	Complete 80%		1	96,98	105		3						Present	
31433	Hollow	S	x=-4, y=-5	73	4	Disturbed by plough	0-20	Equus caballus	Vertebrae cervicale	Complete 80%		1	85,73	110		3						Present	
31433	Hollow	S	x=-4, y=-5	73	5	Disturbed by plough	0-20	Equus caballus	Humerus	Diafys (complete 95%), trochlea humeri & caput humeri	Dex.	4	306	230		1	Present		Cut, scraping			Present	
31433	Hollow	S	x=-4, y=-5	73	6	Disturbed by plough	0-20	Equus caballus	Vertebrae cervicale	Complete		1	81,7	110		3							
31433	Hollow	S	x=-4, y=-5	73	7	Disturbed by plough	0-20	Equus caballus	Vertebrae thoracicae	Complete 90%		1	45,32	185		2							
31433	Hollow	S	x=-4, y=-5	73	8	Disturbed by plough	0-20	Unidentified		Fragment		1	7,52	55		3							
31433	Hollow	S	x=-4, y=-5	73	9	Disturbed by plough	0-20	Equus caballus	Os mandibulae	Angulus mandibulae		1	25,79	100		2	Present		Cut				
31433	Hollow	S	x=-4, y=-5	73	10	Grey mud	125-Bottom	Ovis aries	Os mandibulae + dens	Mandibula (complete); p3-, p4-, m1-, m2- & m3-	Dex.	1	48,27	165		2			Cut, scraping				
31433	Hollow	S	x=-4, y=-5	73	11	Grey mud	125-Bottom	Bos taurus	Os sacrum	Fragment		1	27,24	80		1			Chopped off				
31433	Hollow	S	x=-4, y=-5	73	12	Grey mud	125-Bottom	Unidentified		Fragment		1	4,26	130		2							
31433	Hollow	S	x=-4, y=-5	73	13	Grey mud	125-Bottom	Ovis aries	Ulna	Complet	Sin.	1	6,27	120		1							
31433	Hollow	S	x=-4, y=-5	73	14	Grey mud	125-Bottom	Bos taurus	Metatarsus	Epiphysis (dist.)		1	26,29	45		1							
31433	Hollow	S	x=-4, y=-5	73	15	Grey mud	125-Bottom	Equus caballus	Os coxae	Os illium (complete 90%), os ichium, os pubis & acetabulum	Sin.	1	290,03	305		1	Present	Gnaw, chew, scraping	Cut				
31433	Hollow	S	x=-4, y=-5	73	16	Sandy gravel (bottom)	160-	Equus caballus	Os mandibulae + dens	Mandibula (complete); di1-, di2-, di3-, dC-, dp2-, dp3-, dp4-, m1-, m2- & m3-	Dex.	1	726	420		2	Present				Present		
31433	Hollow	S	x=-4, y=-5	73	17	Sandy gravel (bottom)	160-	Bos taurus	Dens	M1+	Sin.	1	30,97	55		2							
31433	Hollow	S	x=-4, y=-5	73	18	Sandy gravel (bottom)	160-	Canis familiaris	Vertebrae cervicale	Complete 95%		1	10,56	40		2						Present	
31433	Hollow	S	x=-4, y=-6	74	1	Peat	20-60	Equus caballus	Dens	p3-	Dex.	2	41,15	70		3							
31433	Hollow	S	x=-4, y=-6	74	2	Peat	20-60	Equus caballus	Dens	m3-	Dex.	1	43,54	80		2							
31433	Hollow	S	x=-4, y=-6	74	3	Peat	20-60	Unidentified		Fragment		1	27,56	100	Rounding	Not applicable		Pitting					
31433	Hollow	S	x=-4, y=-6	74	4	Peat	20-60	Equus caballus	Os mandibulae	Corpus mandibulae (complete 10%) & angulus mandibulae (complete 40%)	Sin.	1	43,37	150		3		Pitting	Cut				
31433	Hollow	S	x=-4, y=-6	74	5	Peat mud	60-90	Equus caballus	Os mandibulae	Proc. muscularis & proc. coronoideus	Sin.	1	41,48	160		3			Cut				
31433	Hollow	S	x=-4, y=-6	74	6	Peat mud	60-90	Unidentified		Fragment		1	18,75	90		4				Yes			
31433	Hollow	S	x=-4, y=-6	74	7	Peat mud	60-90	Unidentified		Fragment		1	4,34	45		3			Cut				
31433	Hollow	S	x=-4, y=-6	74	8	Peat mud	60-90	Equus caballus	Os mandibulae	Proc. muscularis & proc. coronoideus	Dex.	1	43,94	160		3	Present						
31433	Hollow	S	x=-4, y=-6	74	9	Peat mud	60-90	Equus caballus	Os mandibulae	Fragment		1	39,36	140		3	Present	Pitting			Present		
31433	Hollow	S	x=-4, y=-6	74	10	Peat mud	60-90	Unidentified		Fragment		1	19,41	190		3			Cut			Present	
31433	Hollow	S	x=-4, y=-6	74	11	Peat mud	90-110	Bos taurus	Radius	Diafys (complete 90%) & incisura trochlearis (complete 40%)		1	64,73	165	Rounding	Not applicable							
31433	Hollow	S	x=-4, y=-6	74	12	Peat mud	90-110	Unidentified		Fragment		1	15,12	110		1		Scraping					
31433	Hollow	S	x=-4, y=-6	74	14	Grey mud	110-125	Unidentified		Fragment		1	1,12	55		1							
31433	Hollow	S	x=-4, y=-6	74	13	Grey mud	110-125	Ovis aries	Os mandibulae + dens	Mandibula (complete 95%); p4-, m2- & m3-	Dex.	1	30,29	90		2	Present	Chew					
31433	Hollow	S	x=-4, y=-6	74	15	Grey mud	110-125	Equus caballus	Os tarsi centrale	Complete	Dex.	1	18,54	45		1			Cut				
31433	Hollow	S	x=-4, y=-6	74	16	Grey mud	110-125	Equus caballus	Phalanx III	Complete		1	30,93	65		1							
31433	Hollow	S	x=-4, y=-6	74	17	Grey mud	110-125	Equus caballus	Phalanx III	Complete		1	34,29	70		1							
31433	Hollow	S	x=-4, y=-6	74	18	Grey mud	110-125	Equus caballus	Phalanx II	Complete		1	41,04	50		1							
31433	Hollow	S	x=-4, y=-6	74	19	Grey mud	110-125	Equus caballus	Os sesamoideum	Complete		1	2,78	40		1							
31433	Hollow	S	x=-4, y=-6	74	20	Grey mud	110-125	Equus caballus	Phalanx I	Complete		1	64,37	80		1							

LUHM	Area	Zone	Coordinates	Square nr.	Find nr.	Layer	Depth (cm)	Species	Element	Part	Side	Quantity	Weight (g)	Measurment (mm)	Abrasion	Weathering (Boethius)	Trampling	Gnaw-marks	Butchery-marks	Marrow split	Root etched	Recent damage	Notes
31433	Hollow	S	x=-4, y=-6	74	21	Grey mud	110-125	Equus caballus	Metatarsal IV	Complete	Dex.	1	20,3	175		1							
31433	Hollow	S	x=-4, y=-6	74	22	Grey mud	110-125	Equus caballus	Metacarpal IV	Complete	Dex.	1	10,19	150		1							
31433	Hollow	S	x=-4, y=-6	74	23	Grey mud	125-145	Equus caballus	Metacarpal IV	Complete	Sin.	1	10,55	155		1							
31433	Hollow	S	x=-4, y=-6	74	24	Grey mud	125-145	Unidentified		Fragment		1	18,92	65		1				Yes			
31433	Hollow	S	x=-4, y=-6	74	25	Grey mud	125-145	Bos taurus	Metacarpus	Complete 50% (prox.)	Dex.	1	55,66	105		2	Present			Yes			
31433	Hollow	S	x=-4, y=-6	74	26	Grey mud	125-145	Ovis aries	Os costae	Fragment		1	0,5	30		1							
31433	Hollow	S	x=-4, y=-6	74	27	Grey mud	125-145	Ovis aries	Os costae	Corpus costae 80%		1	4,79	155		1							
31433	Hollow	S	x=-4, y=-6	74	28	Grey mud	125-145	Unidentified		Fragment		1	5,26	75		3			Chop				
31433	Hollow	S	x=-4, y=-6	74	29	Grey mud	125-145	Unidentified		Fragment		1	25,9	110		3				Yes			
31433	Hollow	S	x=-4, y=-6	74	30	Grey mud	125-145	Bos taurus	Metatarsus	Complete 70% (prox.) & diafys (complete 40%)		1	56,18	150		1			Cut	Yes			
31433	Hollow	S	x=-4, y=-6	74	31	Grey mud	125-145	Unidentified		Fragment		1	18,41	135		3							
31433	Hollow	S	x=-4, y=-6	74	32	Grey mud	125-145	Equus caballus	Phalanx II	Complete		1	33,47	45		1							
31433	Hollow	S	x=-4, y=-8	75	1	Disturbed by plough	0-20	Unidentified		Fragment		1	9,95	90		3			Cut				
31433	Hollow	S	x=-4, y=-8	75	2	Disturbed by plough	0-20	Unidentified		Fragment		1	5,52	60		3	Present	Gnaw					
31433	Hollow	S	x=-4, y=-8	75	3	Disturbed by plough	0-20	Unidentified		Fragment		1	9,69	75		1	Present						
31433	Hollow	S	x=-4, y=-8	75	4	Humus	20-40	Bos taurus	Vertebrae thoracicae	Proc. spinalis (complete 50%) & faciec articularis caudalt (complete)		1	20,38	100		2			Cut				
31433	Hollow	S	x=-4, y=-8	75	5	Peat	50-60	Unidentified		Fragment		1	100,56	150		1			Blow				
31433	Hollow	S	x=-4, y=-8	75	6	Sandy gravel (bottom)	145-	Equus caballus	Metacarpus III	Complete	Dex.	1	189,43	210		1	Present						
31433	Hollow	S	x=-4, y=-8	75	7	Sandy gravel (bottom)	145-	Equus caballus	Phalanx I	Complete		1	61,5	80		3			Cut				
31433	Hollow	S	x=-4, y=-9	76	1	Grey mud	60-80	Ovis aries	Os coxae	Os illium (complete 80%), os ichium, os pubis & acetabulum	Sin.	1	25,84	135		2			Chopped off				
31433	Hollow	S	x=-4, y=-9	76	2	Grey mud	60-80	Sus sp.	Os coxae	Os illium (complete 60%), os ichium & acetabulum	Sin.	1	42,22	140		2			Chopped off				
31433	Hollow	S	x=-4, y=-9	76	3	Sand (bottom)	140-	Bos taurus	Os mandibulae + dens	Corpus mandibulae (complete 30%); dp4-, m1- & m2-	Sin.	1	52,91	80		3	Present						
31433	Hollow	S	x=-4, y=-9	76	4	Sand (bottom)	140-	Bos taurus	Dens	m3-; crown & neck (complete), roots (compelte 30%)	Dex.	1	30,88	60		3							
31433	Hollow	S	x=-4, y=-9	76	5	Sand (bottom)	140-	Unidentified		Fragment		1	47,84	165	Rounding	3		Gnaw					
31433	Hollow	S	x=-4, y=-9	76	6	Peat mud	50-60	Bos taurus	Metapod	Epiphysis (dist.)		1	26,31	50		2							
31433	Hollow	S	x=-4, y=-9	76	7	Peat mud	50-60	Ovis aries	Humerus	Diafys (complete 95%) & trochlea humeri	Dex.	1	11,22	100		2		Scraping					
31433	Hollow	S	x=-4, y=-11	77	1	Disturbed by plough	0-20	Unidentified		Fragment		1	13,86	70		3			Chop, cut				
31433	Hollow	S	x=-4, y=-11	77	2	Disturbed by plough	0-20	Bos taurus	Os scapulae	Fossa articularis	Dex.	1	21,04	50		2	Present		Chop				
31433	Hollow	S	x=-4, y=-11	77	3	Sand (bottom)	65-	Unidentified		Fragment		1	23,18	120		1	Present	Gnaw, chew, scraping					
31433	Hollow	S	x=-4, y=-11	77	4	Sand (bottom)	65-	Ovis aries	Femur	Complete	Sin.	1	18,12	100		1		Gnaw		Yes			
31433	Hollow	S	x=-4, y=-11	77	5	Sand (bottom)	65-	Canis familiaris	Vertebrae thoracicae	Complete 50%		1	2,7	25		2							
31433	Hollow	S	x=-4, y=-11	77	6	Sand (bottom)	65-	Canis familiaris	Vertebrae thoracicae	Complete		1	3,26	65		1							
31433	Flooded	S	x=-5, y=-16	46	1	Sandy lime mud	40-50	Unidentified		Fragment		1	5,37	50		3							
31433	Flooded	S	x=-5, y=-16	46	2	Sandy lime mud	40-50	Unidentified		Fragment		1	0,99	55		3							Disturbed surface
31433	Flooded	S	x=-5, y=-16	46	3	Sandy lime mud	40-50	Unidentified		Fragment		1	2,14	35		3							
31433	Flooded	S	x=-5, y=-16	46	4	Sandy lime mud	40-50	Unidentified		Fragment		1	0,66	40		2							
31433	Flooded	S	x=-5, y=-16	46	5	Sandy lime mud	40-50	Unidentified		Fragment		1	0,9	25		3							
31433	Flooded	S	x=-5, y=-17	47	1	Humus	20-30	Unidentified		Fragment		1	2,61	30	Rounding and polishing	Not applicable		Gnaw	Chopp off				
31433	Flooded	S	x=-5, y=-17	47	2	Humus	20-30	Unidentified		Fragment		1	3,06	30		3							
31433	Flooded	S	x=-5, y=-17	47	3	Humus	20-30	Unidentified		Fragment		1	5,44	40		3							
31433	Flooded	S	x=-5, y=-17	47	4	Sandy lime mud	30-40	Unidentified		Fragment		1	18,36	85	Rounding	3	Present						
31433	Flooded	S	x=-5, y=-17	47	5	Sandy lime mud	30-40	Equus caballus	Calcaneus	Complete 80%	Dex.	1	46,65	95		3		Gnaw					
31433	Flooded	S	x=-5, y=-18	48	1	Humus	20-30	Unidentified		Fragment		1	1,32	25		3							
31433	Flooded	S	x=-5, y=-18	48	2	Humus	20-30	Unidentified		Fragment		1	0,81	30		3							
31433	Flooded	S	x=-5, y=-18	48	3	Humus	20-30	Unidentified		Fragment		1	1,7	50		1							Disturbed surface
31433	Flooded	S	x=-5, y=-18	48	4	Humus	20-30	Unidentified		Fragment		1	1,31	20		3							
31433	Flooded	S	x=-5, y=-18	48	5	Humus	20-30	Unidentified		Fragment		1	0,76	30		3							
31433	Flooded	S	x=-5, y=-18	48	6	Humus	20-30	Ovis aries	Dens	m1-		1	1,91	20		1							
31433	Flooded	S	x=-5, y=-18	48	7	Sandy lime mud	30-40	Unidentified		Fragment		1	1,96	20		3						Present	
31433	Flooded	S	x=-5, y=-18	48	8	Sandy lime mud	30-40	Unidentified		Fragment		1	2,82	40	Polishing	Not applicable							
31433	Flooded	S	x=-5, y=-18	48	9	Sandy lime mud	30-40	Unidentified		Fragment		1	2,33	40	Rounding and polishing	Not applicable			Blow	Yes	Present		
31433	Flooded	S	x=-5, y=-18	48	10	Sandy lime mud	30-40	Canis familiaris	Metatarsale II	Complete 45% (prox.)	Dex.	1	1,51	40	Rounding	1	Present						
31433	Flooded	S	x=-5, y=-18	48	11	Sandy lime mud	30-40	Equus caballus	Radius	Diaphys (complete)	Dex.	1	97,52	200	Polishing	Not applicable		Gnaw, scraping			Present		
31433	Flooded	S	x=-5, y=-19	49	1	Sandy gravel (bottom)	60-	Unidentified		Fragment		1	16,1	75	Rounding	3							
31433	Flooded	S	x=-5, y=-19	49	2	Sandy gravel (bottom)	60-	Unidentified		Fragment		1	23,95	70	Rounding	3							
31433	Flooded	S	x=-5, y=-20	50	1	Humus	20-30	Unidentified		Fragment		1	1,03	25		1						Present	
31433	Flooded	S	x=-5, y=-20	50	2	Humus	20-30	Unidentified		Fragment		1	2,02	45		1			Chopped off				
31433	Flooded	S	x=-5, y=-20	50	3	Humus	20-30	Unidentified		Fragment		1	0,23	20		1							
31433	Flooded	S	x=-5, y=-20	50	4	Humus	20-30	Unidentified		Fragment		1	0,25	15		1							
31433	Flooded	S	x=-5, y=-20	50	5	Humus	30-40	Unidentified		Fragment		1	4,79	45		1							
31433	Flooded	S	x=-5, y=-20	50	6	Humus	30-40	Unidentified		Fragment		1	1,41	40		3							
31433	Flooded	S	x=-5, y=-20	50	7	Humus	30-40	Unidentified		Fragment		1	0,87	45		1							
31433	Flooded	S	x=-5, y=-20	50	8	Humus	30-40	Unidentified		Fragment		2	2,73	30		2					Present		
31433	Flooded	S	x=-5, y=-20	50	9	Humus	30-40	Unidentified		Fragment		1	1,07	25		3							
31433	Flooded	S	x=-5, y=-20	50	10	Humus	30-40	Unidentified		Fragment		1	1,01	20		1							
31433	Flooded	S	x=-5, y=-20	50	11	Humus	30-40	Unidentified		Fragment		1	0,58	15		3							
31433	Flooded	S	x=-5, y=-20	50	12	Humus	30-40	Unidentified		Fragment		1	1,72	25		3							
31433	Flooded	S	x=-5, y=-20	50	13	Sandy lime mud	40-50	Bos taurus	Humerus	Fragment		2	23,64	85	Rounding	1	Present			Yes		Present	Number 13 and 14 belongs together
31433	Flooded	S	x=-5, y=-20	50	15	Sandy gravel (bottom)	60-	Unidentified		Fragment		1	0,81	25	Rounding	1							
31433	Flooded	S	x=-5, y=-20	50	16	Sandy gravel (bottom)	60-	Equus caballus	Dens	m3-	Dex.	1	20,11	40		2							
31433	Flooded	S	x=-5, y=-21	51	1	Humus	20-30	Unidentified		Fragment		1	3,33	40		3							
31433	Flooded	S	x=-5, y=-21	51	2	Humus	20-30	Equus caballus	Dens	m3-	Sin.	1	11,34	35		2							
31433	Flooded	S	x=-5, y=-21	51	3	Humus	20-30	Equus caballus	Dens	m3-	Dex.	1	11,1	35		2							
31433	Flooded	S	x=-5, y=-21	51	4	Humus	20-30	Unidentified		Fragment		1	1,79	25		3							
31433	Flooded	S	x=-5, y=-21	51	5	Humus	30-40	Unidentified		Fragment		1	0,55	15		3							
31433	Flooded	S	x=-5, y=-21	51	6	Humus	30-40	Unidentified		Fragment		1	0,8	25		2							
31433	Flooded	S	x=-5, y=-21	51	7	Humus	30-40	Unidentified		Fragment		1	4,22	30		3							
31433	Flooded	S	x=-5, y=-21	51	8	Humus	30-40	Unidentified		Fragment		1	1,55	30		1			Cut, blow				
31433	Flooded	S	x=-5, y=-21	51	9	Humus	30-40	Unidentified		Fragment		1	12,38	80	Rounding	3	Present				Present		
31433	Flooded	S	x=-5, y=-21	51	10	Humus	30-40	Unidentified		Fragment		1	5,21	35	Rounding	3							
31433	Flooded	S	x=-5, y=-21	51	11	Humus	30-40	Unidentified		Fragment		1	0,5	15		3							
31433	Flooded	S	x=-5, y=-21	51	12	Humus	30-40	Unidentified		Fragment		1	1,19	30		3					Present		
31433	Flooded	S	x=-5, y=-21	51	13	Humus	30-40	Unidentified		Fragment		1	0,6	15		1							
31433	Flooded	S	x=-5, y=-21	51	14	Sandy gravel (bottom)	60-	Unidentified		Fragment		1	28,82	95	Rounding	1	Present		Cut, blow	Yes	Present		
31433	Flooded	S	x=-5, y=-23	52	1	Humus	20-30	Unidentified		Fragment		1	0,69	25		3							
31433	Flooded	S	x=-5, y=-23	52	2	Humus	20-30	Unidentified		Fragment		1	1,47	20		2							
31433	Flooded	S	x=-5, y=-23	52	3	Humus	20-30	Unidentified		Fragment		1	0,64	20		3							
31433	Flooded	S	x=-5, y=-23	52	4	Humus	20-30	Bos taurus	Phalanx I	Compelte 35% (dist.)		1	6,52	40	Rounding and polishing	Not applicable			Cut				
31433	Flooded	S	x=-5, y=-23	52	5	Humus	20-30	Unidentified		Fragment		1	0,37	15		1							
31433	Flooded	S	x=-5, y=-23	52	6	Humus	20-30	Canis familiaris	Dens	C+	Sin.	1	2,85	40		2							
31433	Flooded	S	x=-5, y=-23	52	7	Humus	20-30	Bos taurus	Metacarpus	Complete 80%	Sin.	1	103,85	150		3	Present				Present		
31433	Flooded	S	x=-5, y=-23	52	8	Humus	20-30	Unidentified		Fragment		1	1,19	35		1							
31433	Flooded	S	x=-5, y=-23	52	9	Humus	20-30	Unidentified		Fragment		1	2	25		3							
31433	Flooded	S	x=-5, y=-23	52	10	Humus	20-30	Unidentified		Fragment		1	1,32	45		3		Pitting, scraping			Present		
31433	Flooded	S	x=-5, y=-23	52	11	Humus	30-40	Unidentified		Fragment		1	1,23	20		3							
31433	Flooded	S	x=-5, y=-23	52	12	Humus	30-40	Unidentified		Fragment		1	1,24	30		3			Chopped off				
31433	Flooded	S	x=-5, y=-23	52	13	Humus	30-40	Unidentified		Fragment		1	2,64	55	Rounding and polishing	Not applicable	Present						
31433	Flooded	S	x=-5, y=-23	52	14	Humus	30-40	Unidentified		Fragment		1	0,61	30		1							
31433	Flooded	S	x=-5, y=-23	52	15	Humus	30-40	Unidentified		Fragment		1	3,33	50	Rounding and polishing	Not applicable	Present						
31433	Flooded	S	x=-5, y=-23	52	16	Humus	30-40	Bos taurus	Metacarpus	Complete 10% (dist.)		1	7,17	30	Rounding	3							
31433	Flooded	S	x=-5, y=-23	52	17	Humus	30-40	Bos taurus	Metacarpus	Complete 10% (dist.)		1	8,16	40	Rounding	3							
31433	Flooded	S	x=-5, y=-23	52	18	Humus	30-40	Bos taurus	Phalanx II	Complete 95%		1	7,41	40		3							
31433	Flooded	S	x=-5, y=-23	52	19	Humus	30-40	Bos taurus	Phalanx II	Complete 95%		1	7,42	40	Rounding	3							
31433	Flooded	S	x=-5, y=-23	52	20	Humus	30-40	Unidentified		Fragment		1	14,72	65	Rounding and polishing	Not applicable	Present		Cut	Yes			
31433	Flooded	S	x=-5, y=-23	52	21	Humus	30-40	Unidentified		Fragment		1	13,8	75	Rounding and polishing	Not applicable	Present			Yes	Present		
31433	Flooded	S	x=-5, y=-25	53	1	Humus	30-40	Canis familiaris	Dens	M1+	Sin.	1	1,76	15		3							
31433	Flooded	S	x=-5, y=-25	53	2	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	1,12	35	Rounding and polishing	Not applicable							
31433	Flooded	S	x=-5, y=-25	53	3	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	14	110	Rounding and polishing	Not applicable				Yes			Disturbed surface
31433	Flooded	S	x=-5, y=-25	53	4	Sandy gravel (bottom)	50-	Unidentified		Fragment		1	24,62	100	Rounding and polishing	Not applicable	Present	Gnaw, chew					
31433	Flooded	S	x=-5, y=-26	54	1	Humus	20-30	Unidentified		Fragment		1	0,83	20		3							
31433	Flooded	S	x=-5, y=-26	54	2	Humus	20-30	Unidentified		Fragment		1	1,01	35	Rounding	3							
31433	Flooded	S	x=-5, y=-26	54	3	Humus	20-30	Equus caballus	Tibia	Diaphys 80%	Dex.	1	101,33	170	Rounding and polishing	Not applicable	Present	Gnaw, chew, scraping	Cut, scraping				
31433	Flooded	S	x=-5, y=-27	55	1	Sandy lime mud	30-40	Unidentified		Fragment		1	7,07	70	Rounding and polishing	Not applicable					Present		
31433	Flooded	S	x=-5, y=-27	55	2	Sandy lime mud	30-40	Canis familiaris	Metatarsale II	Complete 40%	Dex.	1	0,74	25		1						Present	
31433	Flooded	S	x=-5, y=-28	56	1	Sandy lime mud	30-40	Unidentified		Fragment		1	1,31	30		3							
31433	Flooded	S	x=-5, y=-28	56	2	Sandy lime mud	30-40	Unidentified		Fragment		1	3,35	45		1							
31433	Flooded	S	x=-5, y=-28	56	3	Sandy lime mud	30-40	Unidentified		Fragment		1	3,35	40		3							
31433	Flooded	S	x=-5, y=-28	56	4	Sandy lime mud	30-40	Unidentified		Fragment		1	3,48	35		1							
31433	Flooded	S	x=-5, y=-28	56	5	Sandy lime mud	30-40	Unidentified		Fragment		1	2,09	35		3	Present						
31433	Flooded	S	x=-5, y=-28	56	6	Sandy lime mud	30-40	Equus caballus	Humerus	Proximal fragment		1	38,91	90		3					Present	Present	Belongs to number 8
31433	Flooded	S	x=-5, y=-28	56	7	Sandy lime mud	30-40	Equus caballus	Humerus	Diaphys 55%	Sin.	1	118,97	180		1		Gnaw	Blow		Present		
31433	Flooded	S	x=-5, y=-28	56	8	Sandy lime mud	30-40	Equus caballus	Humerus	Complete 80%	Dex.	2	376,27	295		1					Present	Present	Belongs to number 6
31433	Flooded	S	x=-5, y=-28	56	9	Sandy gravel (bottom)	40-	Unidentified		Fragment		1	0,73	30		1							
31433	Flooded	S	x=-5, y=-28	56	10	Sandy gravel (bottom)	40-	Unidentified		Fragment		1	16,97	80	Rounding and polishing	Not applicable	Present		Chop, cut				
31433	Flooded	S	x=-5, y=-29	57	1	Sandy gravel (bottom)	40-	Unidentified		Fragment		1	6,81	45		1							
31433	Flooded	S	x=-5, y=-29	57	2	Sandy gravel (bottom)	40-	Unidentified		Fragment		1	0,83	25		1							
31433	Flooded	S	x=-5, y=-29	57	3	Sandy gravel (bottom)	40-	Bos taurus	Os mandibulae	Fragment	Sin.	1	23,23	65	Rounding and polishing	Not applicable		Gnaw					
31433	Flooded	S	x=-5, y=-29	57	4	Sandy gravel (bottom)	40-	Unidentified		Fragment		1	1,81	30	Rounding and polishing	Not applicable							
31433	Flooded	S	x=-5, y=-29	57	5	Sandy gravel (bottom)	40-	Bos taurus	Os mandibulae	Proc. articularis & proc. coronoideus	Dex.	1	40,46	120	Polishing	Not applicable	Present	Gnaw	Chop		Present		
31433	Flooded	E	x=+0, y=+9	141	1	Reddish peat	25-35	Unidentified		Fragment		1	2,32	45		1	Present		Chop			Present	
31433	Flooded	E	x=+0, y=+9	141	2	Reddish peat	25-35	Unidentified		Fragment		1	2,59	35		3						Present	
31433	Flooded	E	x=+0, y=+9	141	3	Reddish peat	25-35	Unidentified		Fragment		1	1,4	45		3	Present			Yes	Present		
31433	Flooded	E	x=+0, y=+9	141	4	Reddish peat	25-35	Unidentified		Fragment		1	4,33	35		1						Present	
31433	Flooded	E	x=+0, y=+9	141	5	Reddish peat	35-45	Unidentified		Fragment		1	1,17	4		1	Present		Cut	Yes		Present	
31433	Flooded	E	x=+0, y=+9	141	6	Reddish peat	35-45	Unidentified		Fragment		1	1,1	3		3			Chop	Yes		Present	
31433	Flooded	E	x=+0, y=+9	141	7	Reddish peat	35-45	Unidentified		Fragment		1	0,78	25		2	Present		Cut	Yes		Present	
31433	Flooded	E	x=+0, y=+9	141	8	Reddish peat	45-55	Equus caballus	Os mandibulae	Fragment		1	34,08	115		2	Present		Cut			Present	
31433	Flooded	E	x=+0, y=+9	141	9	Reddish peat	45-55	Equus caballus	Os mandibulae	Fragment		1	67,17	135		2	Present		Cut			Present	
31433	Flooded	E	x=+0, y=+9	141	10	Reddish peat	45-55	Equus caballus	Os mandibulae	Fragment		1	15,31	55		2	Present					Present	
31433	Flooded	E	x=+0, y=+9	141	11	Reddish peat	45-55	Equus caballus	Os mandibulae	Fragment		1	33,94	115		2	Present		Cut			Present	
31433	Flooded	E	x=+0, y=+9	141	12	Reddish peat	45-55	Unidentified		Fragment		1	2,5	5		1		Chew		Yes			
31433	Flooded	E	x=+0, y=+9	141	13	Lime mud	55-65	Unidentified		Fragment		1	17,18	85	Rounding and polishing	2	Present	Gnaw	Cut	Yes		Present	
31433	Flooded	E	x=-0, y=+9	142	1	Disturbed by plough	0-25	Equus caballus	Os Coxae	Acetabulum (compelte 50%) & os illium (complete 10%)		1	57,82	9		3					Present	Present	
31433	Flooded	E	x=-0, y=+9	142	2	Disturbed by plough	0-25	Sus sp.	Dens	i2-; crown & neck (complete), root (compelte 10%)	Dex.	1	3,06	5		3							
31433	Flooded	E	x=-0, y=+9	142	3	Humus	25-35	Unidentified		Fragmented		1	3,71	5		2	Present				Present	Present	
31433	Flooded	E	x=-0, y=+9	142	4	Humus	25-35	Unidentified		Fragment		1	8,29	7	Rounding and polishing	1	Present						
31433	Flooded	E	x=-0, y=+9	142	5	Humus	25-35	Unidentified		Fragment		1	2,67	6	Polishing	Not applicable							
31433	Flooded	E	x=-0, y=+9	142	6	Humus	25-35	Unidentified		Fragment		1	12,92	7		2		Chew			Present		
31433	Flooded	E	x=-0, y=+9	142	7	Reddish peat	35-45	Equus caballus	Dens	p4+	Dex.	1	27,57	55		2							
31433	Flooded	E	x=-0, y=+9	142	8	Reddish peat	35-45	Unidentified		Fragment		1	2,85	4		1			Cut				
31433	Flooded	E	x=-0, y=+9	142	9	Reddish peat	35-45	Unidentified		Fragment		1	0,86	25		1					Present		
31433	Flooded	E	x=-0, y=+9	142	10	Reddish peat	45-55	Equus caballus	Dens	m3-	Dex.	1	20,24	55		2							
31433	Flooded	E	x=-0, y=+9	142	11	Reddish peat	45-55	Unidentified		Fragment		1	1,1	45		2							
31433	Flooded	E	x=-0, y=+9	142	12	Reddish peat	45-55	Unidentified		Fragment		1	1,34	3		1							
31433	Flooded	E	x=-0, y=+9	142	13	Reddish peat	45-55	Unidentified		Fragment		1	4,81	5		1					Present		
31433	Flooded	E	x=-0, y=+9	142	14	Lime mud	55-65	Equus caballus	Phalanx I	Complete 95%	Sin.	1	43,54	7		2	Present	Gnaw, pitting	Scraping				
31433	Flooded	E	x=-0, y=+9	142	15	Lime mud	55-65	Unidentified		Fragment		1	8,7	4		1							
31433	Flooded	E	x=-0, y=+9	142	16	Lime mud	55-65	Unidentified		Fragmented		1	2,46	3		1		Gnaw					
31433	Flooded	E	x=-1, y=+9	143	1	Humus	25-35	Equus caballus	Os costae	Complete 40%	Sin.	1	12,44	115		1	Present		Chop		Present		
31433	Flooded	E	x=-1, y=+9	143	2	Humus	25-35	Unidentified		Fragment		1	23	2		2							
31433	Flooded	E	x=-1, y=+9	143	3	Humus	25-35	Unidentified		Fragment		1	1,13	3		1	Present						
31433	Flooded	E	x=-1, y=+9	143	4	Humus	25-35	Unidentified		Fragment		1	10,46	75	Polishing	1					Present		
31433	Flooded	E	x=-1, y=+9	143	5	Humus	25-35	Unidentified		Fragment		1	3,35	4		1							
31433	Flooded	E	x=-1, y=+9	143	6	Humus	25-35	Unidentified		Fragment		1	4,45	7		1					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	7	Humus	25-35	Unidentified		Fragment		1	2,23	35		1							
31433	Flooded	E	x=-1, y=+9	143	8	Humus	25-35	Unidentified		Fragment		1	2,05	3		1	Present				Present		
31433	Flooded	E	x=-1, y=+9	143	9	Humus	25-35	Unidentified		Fragment		1	6,03	45		3					Present		
31433	Flooded	E	x=-1, y=+9	143	10	Humus	25-35	Unidentified		Fragment		1	0,72	3		2	Present						
31433	Flooded	E	x=-1, y=+9	143	11	Humus	25-35	Unidentified		Fragment		1	3,01	6		1	Present	Pitting					
31433	Flooded	E	x=-1, y=+9	143	12	Humus	25-35	Unidentified		Fragment		1	0,49	35	Polishing	1							
31433	Flooded	E	x=-1, y=+9	143	13	Humus	25-35	Unidentified		Fragment		1	1,41	4		2					Present		
31433	Flooded	E	x=-1, y=+9	143	14	Humus	25-35	Unidentified		Fragment		1	0,82	35		1			Cut				
31433	Flooded	E	x=-1, y=+9	143	15	Humus	25-35	Unidentified		Fragment		1	1,09	4		1	Present				Present		
31433	Flooded	E	x=-1, y=+9	143	16	Humus	25-35	Unidentified		Fragment		1	1,05	4	Rounding and polishing	3							
31433	Flooded	E	x=-1, y=+9	143	17	Humus	25-35	Unidentified		Fragment		1	1,66	35		1							
31433	Flooded	E	x=-1, y=+9	143	18	Humus	25-35	Unidentified		Fragment		1	10,87	5		1					Present		
31433	Flooded	E	x=-1, y=+9	143	19	Humus	25-35	Unidentified		Fragment		1	1,13	35		1					Present		
31433	Flooded	E	x=-1, y=+9	143	20	Humus	25-35	Unidentified		Fragment		1	2,66	45	Polishing	1							
31433	Flooded	E	x=-1, y=+9	143	22	Humus	25-35	Unidentified		Fragment		1	2,93	6		1					Present		
31433	Flooded	E	x=-1, y=+9	143	21	Humus	25-35	Unidentified		Fragment		1	8,52	55		2			Cut		Present		
31433	Flooded	E	x=-1, y=+9	143	23	Humus	25-35	Unidentified		Fragment		1	3,97	35		2							
31433	Flooded	E	x=-1, y=+9	143	24	Humus	25-35	Equus caballus	Cranium	Os temporale (complete 30%)	Dex.	1	18,1	7		1					Present		
31433	Flooded	E	x=-1, y=+9	143	25	Humus	25-35	Unidentified		Fragment		1	13,65	65		1							
31433	Flooded	E	x=-1, y=+9	143	26	Humus	25-35	Equus caballus	Os costae	Complete 20%	Dex.	1	13,03	8		2	Present		Scraping	Yes			
31433	Flooded	E	x=-1, y=+9	143	27	Humus	25-35	Equus caballus	Os coxae	Acetabulum (complete 50%), os illium (complete 20%)	Dex.	1	82,37	5		3	Present	Pitting, scraping	Cut			Present	
31433	Flooded	E	x=-1, y=+9	143	28	Reddish peat	35-45	Unidentified		Fragment		1	0,8	2		1					Present		
31433	Flooded	E	x=-1, y=+9	143	29	Reddish peat	35-45	Unidentified		Fragment		1	1,09	35		1							
31433	Flooded	E	x=-1, y=+9	143	30	Reddish peat	35-45	Unidentified		Fragment		1	0,26	2		1						Present	
31433	Flooded	E	x=-1, y=+9	143	31	Reddish peat	35-45	Unidentified		Fragment		1	0,43	25		2						Present	
31433	Flooded	E	x=-1, y=+9	143	32	Reddish peat	35-45	Ovis aries	Os mandibulae	Proc. articularis	Sin.	1	4,35	45		3					Present		
31433	Flooded	E	x=-1, y=+9	143	33	Reddish peat	35-45	Unidentified		Fragment		1	0,58	3		1						Present	
31433	Flooded	E	x=-1, y=+9	143	34	Reddish peat	35-45	Unidentified		Fragment		1	0,66	25		1	Present						
31433	Flooded	E	x=-1, y=+9	143	35	Reddish peat	35-45	Unidentified		Fragment		1	8,35	45		2					Present		
31433	Flooded	E	x=-1, y=+9	143	36	Reddish peat	35-45	Unidentified		Fragment		1	2,9	3	Rounding	1					Present		
31433	Flooded	E	x=-1, y=+9	143	37	Reddish peat	35-45	Unidentified		Fragment		1	2,03	4		1	Present						
31433	Flooded	E	x=-1, y=+9	143	38	Reddish peat	35-45	Unidentified		Fragment		1	1,79	4		1							
31433	Flooded	E	x=-1, y=+9	143	39	Reddish peat	35-45	Unidentified		Fragment		1	3,31	45		1	Present						
31433	Flooded	E	x=-1, y=+9	143	40	Reddish peat	35-45	Unidentified		Fragment		1	14,5	9		2	Present				Present	Present	
31433	Flooded	E	x=-1, y=+9	143	41	Reddish peat	35-45	Unidentified		Fragment		1	3,62	7		3					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	42	Reddish peat	35-45	Unidentified		Fragment		1	7,19	95		2	Present						
31433	Flooded	E	x=-1, y=+9	143	43	Reddish peat	35-45	Unidentified		Fragment		1	4,17	5		2					Present		
31433	Flooded	E	x=-1, y=+9	143	44	Reddish peat	35-45	Equus caballus	Os mandibulae	Proc. articularis	Dex.	1	39,39	8		2	Present				Present		
31433	Flooded	E	x=-1, y=+9	143	45	Reddish peat	35-45	Equus caballus	Os carpi intermedium	Complete	Sin.	1	11,2	35		2							
31433	Flooded	E	x=-1, y=+9	143	46	Reddish peat	35-45	Unidentified		Fragment		1	13,4	125		1		Chew	Scraping	Yes			
31433	Flooded	E	x=-1, y=+9	143	47	Reddish peat	35-45	Unidentified		Fragment		1	17,98	9		2		Chew				Present	
31433	Flooded	E	x=-1, y=+9	143	48	Reddish peat	35-45	Equus caballus	Os sacrum	Fragment		1	21,9	65		2							
31433	Flooded	E	x=-1, y=+9	143	49	Reddish peat	35-45	Unidentified		Fragment		1	1,54	25		1							
31433	Flooded	E	x=-1, y=+9	143	50	Reddish peat	35-45	Equus caballus	Phalanx II	Complete	Dex.	1	30,81	45		2			Cut				
31433	Flooded	E	x=-1, y=+9	143	51	Reddish peat	35-45	Unidentified		Fragment		1	8,51	4		3							
31433	Flooded	E	x=-1, y=+9	143	52	Reddish peat	35-45	Equus caballus	Vertebrae	Fragment		1	30	10		3						Present	
31433	Flooded	E	x=-1, y=+9	143	53	Reddish peat	35-45	Unidentified		Fragment		1	0,37	25		1	Present					Present	
31433	Flooded	E	x=-1, y=+9	143	54	Reddish peat	35-45	Equus caballus	Os costae	Complete 60%		1	13,93	14		2	Present				Present		
31433	Flooded	E	x=-1, y=+9	143	55	Reddish peat	45-55	Unidentified		Fragment		1	2,74	55		1					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	56	Reddish peat	45-55	Unidentified		Fragment		1	2,03	25		3					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	57	Reddish peat	45-55	Unidentified		Fragment		1	0,94	25		3							
31433	Flooded	E	x=-1, y=+9	143	58	Reddish peat	45-55	Unidentified		Fragment		1	1,97	3		2							
31433	Flooded	E	x=-1, y=+9	143	59	Reddish peat	45-55	Unidentified		Fragment		1	1,78	45		1				Yes		Present	
31433	Flooded	E	x=-1, y=+9	143	60	Reddish peat	45-55	Unidentified		Fragment		1	2,78	45		1					Present		
31433	Flooded	E	x=-1, y=+9	143	61	Reddish peat	45-55	Unidentified		Fragment		1	2,43	35		3							
31433	Flooded	E	x=-1, y=+9	143	62	Reddish peat	45-55	Unidentified		Fragment		1	0,55	3		1							

LUHM	Area	Zone	Coordinates	Square nr.	Find nr.	Layer	Depth (cm)	Species	Element	Part	Side	Quantity	Weight (g)	Measurment (mm)	Abrasion	Weathering (Boethius)	Trampling	Gnaw-marks	Butchery-marks	Marrow split	Root etched	Recent damage	Notes
31433	Flooded	E	x=-1, y=+9	143	63	Reddish peat	45-55	Unidentified		Fragment		1	1,08	4		1		Gnaw					
31433	Flooded	E	x=-1, y=+9	143	64	Reddish peat	45-55	Unidentified		Fragment		1	3,75	3		1							
31433	Flooded	E	x=-1, y=+9	143	65	Reddish peat	45-55	Unidentified		Fragment		1	4,89	8		1	Present		Cut		Present	Present	
31433	Flooded	E	x=-1, y=+9	143	66	Reddish peat	45-55	Unidentified		Fragment		1	26,31	5	Rounding and polishing	1							
31433	Flooded	E	x=-1, y=+9	143	67	Reddish peat	45-55	Unidentified		Fragment		1	17,58	65		2	Present						
31433	Flooded	E	x=-1, y=+9	143	68	Reddish peat	45-55	Unidentified		Fragment		1	4,92	65		2			Cut				
31433	Flooded	E	x=-1, y=+9	143	69	Reddish peat	45-55	Equus caballus	Metapod III	Complete 20% (dist.)		1	31,23	55		3							
31433	Flooded	E	x=-1, y=+9	143	70	Reddish peat	45-55	Equus caballus	Vertebrae thoracicae	Complete 60%		1	55,27	11		2					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	71	Reddish peat	45-55	Equus caballus	Vertebrae lumbale	Complete 50%		1	49,04	13		2						Present	
31433	Flooded	E	x=-1, y=+9	143	72	Reddish peat	45-55	Equus caballus	Os maxillare + dens	Maxilla (complete 10%); dp2+	Sin.	1	31,22	6		2					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	73	Reddish peat	45-55	Unidentified		Fragment		1	3,57	4		1	Present					Present	
31433	Flooded	E	x=-1, y=+9	143	74	Reddish peat	45-55	Equus caballus	Dens	dp4+	Sin.	1	22,62	4		2						Present	
31433	Flooded	E	x=-1, y=+9	143	75	Reddish peat	45-55	Unidentified		Fragment		1	2,11	35		1			Chop	Yes		Present	
31433	Flooded	E	x=-1, y=+9	143	76	Reddish peat	45-55	Unidentified		Fragment		1	4,53	55		2			Cut			Present	
31433	Flooded	E	x=-1, y=+9	143	77	Reddish peat	45-55	Unidentified		Fragment		1	1,11	3		1	Present					Present	
31433	Flooded	E	x=-1, y=+9	143	78	Reddish peat	45-55	Unidentified		Fragment		1	0,62	25		1						Present	
31433	Flooded	E	x=-1, y=+9	143	79	Reddish peat	45-55	Unidentified		Fragment		1	0,87	35		1					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	80	Reddish peat	45-55	Unidentified		Fragment		1	1,07	2		1					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	81	Reddish peat	45-55	Unidentified		Fragment		1	0,76	3		1	Present					Present	
31433	Flooded	E	x=-1, y=+9	143	82	Reddish peat	45-55	Equus caballus	Dens	dp3+		1	19,07	45		2						Present	
31433	Flooded	E	x=-1, y=+9	143	83	Reddish peat	45-55	Unidentified		Fragment		3	1,83	3		1						Present	
31433	Flooded	E	x=-1, y=+9	143	84	Reddish peat	45-55	Unidentified		Fragment		1	0,36	25		2						Present	
31433	Flooded	E	x=-1, y=+9	143	85	Reddish peat	45-55	Unidentified		Fragment		1	2,16	3		3						Present	
31433	Flooded	E	x=-1, y=+9	143	86	Reddish peat	45-55	Unidentified		Fragment		1	0,65	25		1							
31433	Flooded	E	x=-1, y=+9	143	87	Reddish peat	45-55	Unidentified		Fragment		1	3,18	5		2					Present	Present	
31433	Flooded	E	x=-1, y=+9	143	88	Lime mud	55-65	Unidentified		Fragment		1	8,61	105		1			Cut				
31433	Flooded	E	x=-1, y=+9	143	89	Lime mud	55-65	Unidentified		Fragment		1	14,08	9	Rounding and polishing	2	Present	Gnaw	Cut				
31433	Flooded	E	x=-1, y=+9	143	90 & 91	Lime mud	55-65	Equus caballus	Cranium	Proc. zygomaticum (complete 40%), tuberculum articulare	Sin.	2	10,76	85		2			Chop, cut	Yes			Glued togehter
31433	Flooded	E	x=-2, y=+9	144	1	Humus	25-35	Unidentified		Fragment		1	1,47	3		1						Present	
31433	Flooded	E	x=-2, y=+9	144	2	Humus	25-35	Unidentified		Fragment		1	1,51	35		1							
31433	Flooded	E	x=-2, y=+9	144	3	Humus	25-35	Unidentified		Fragment		1	1,01	35		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	4	Humus	25-35	Unidentified		Fragment		1	5,83	6		1							
31433	Flooded	E	x=-2, y=+9	144	5	Humus	25-35	Sus sp.	Tibia	Diafys (complete 45%)	Dex.	1	11,72	65		3	Present				Present	Present	
31433	Flooded	E	x=-2, y=+9	144	6	Humus	25-35	Unidentified		Fragment		1	5,34	55		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	7	Humus	25-35	Unidentified		Fragment		1	11,47	5		1							
31433	Flooded	E	x=-2, y=+9	144	8	Humus	25-35	Equus caballus	Vertebrae thoracicae	Complete 60%		1	19,84	6		1							
31433	Flooded	E	x=-2, y=+9	144	9	Humus	25-35	Unidentified		Fragment		1	2,82	45		1							
31433	Flooded	E	x=-2, y=+9	144	10	Humus	25-35	Unidentified		Fragment		1	1,73	5		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	11	Humus	25-35	Unidentified		Fragment		1	3,75	4		1							
31433	Flooded	E	x=-2, y=+9	144	12	Humus	25-35	Equus caballus	Os costae	Complete 40%		1	10,92	115		2			Cut		Present	Present	
31433	Flooded	E	x=-2, y=+9	144	13	Humus	25-35	Unidentified		Fragment		1	0,33	2		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	14	Humus	25-35	Unidentified		Fragment		1	0,67	2		1							
31433	Flooded	E	x=-2, y=+9	144	15	Humus	25-35	Unidentified		Fragment		1	1,04	45		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	16	Humus	25-35	Unidentified		Fragment		1	0,58	2		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	17	Humus	25-35	Unidentified		Fragment		1	0,46	25		3						Present	
31433	Flooded	E	x=-2, y=+9	144	18	Humus	25-35	Unidentified		Fragment		1	2,3	45		1	Present					Present	
31433	Flooded	E	x=-2, y=+9	144	19	Humus	25-35	Unidentified		Fragment		1	2,73	6		1	Present		Cut			Present	
31433	Flooded	E	x=-2, y=+9	144	20	Humus	25-35	Unidentified		Fragment		1	1,85	3		1						Present	
31433	Flooded	E	x=-2, y=+9	144	21	Humus	25-35	Unidentified		Fragment		1	4,61	10		1		Gnaw				Present	
31433	Flooded	E	x=-2, y=+9	144	22	Humus	25-35	Unidentified		Fragment		1	11,43	75		2	Present	Gnaw			Present	Present	
31433	Flooded	E	x=-2, y=+9	144	23	Humus	25-35	Unidentified		Fragment		1	0,86	3		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	24	Humus	25-35	Unidentified		Fragment		1	1,38	45		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	25	Humus	25-35	Unidentified		Fragment		1	6,45	12		2			Cut			Present	
31433	Flooded	E	x=-2, y=+9	144	26	Humus	25-35	Unidentified		Fragment		1	0,97	4		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	27	Humus	25-35	Unidentified		Fragment		1	5,24	12		2	Present					Present	
31433	Flooded	E	x=-2, y=+9	144	28	Humus	25-35	Unidentified		Fragment		1	1,91	35		1							
31433	Flooded	E	x=-2, y=+9	144	29	Humus	25-35	Unidentified		Fragment		1	0,5	3		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	30	Humus	25-35	Unidentified		Fragment		1	0,8	4		1						Present	
31433	Flooded	E	x=-2, y=+9	144	31	Humus	25-35	Unidentified		Fragment		1	3,67	4		1						Present	
31433	Flooded	E	x=-2, y=+9	144	32	Humus	25-35	Unidentified		Fragment		1	12,57	6		1							
31433	Flooded	E	x=-2, y=+9	144	33	Humus	25-35	Unidentified		Fragment		1	1,28	5		1							
31433	Flooded	E	x=-2, y=+9	144	34	Humus	25-35	Unidentified		Fragment		1	6,88	12		2		Gnaw			Present		
31433	Flooded	E	x=-2, y=+9	144	35	Humus	25-35	Unidentified		Fragment		1	21,06	135		3	Present		Cut		Present		
31433	Flooded	E	x=-2, y=+9	144	36	Humus	25-35	Equus caballus	Tibia	Distal epiphysis (complete)	Dex.	1	28,94	65		1					Present		
31433	Flooded	E	x=-2, y=+9	144	37	Humus	25-35	Equus caballus	Vertebrae thoracicae	Complete 80%		1	17,33	65		1							
31433	Flooded	E	x=-2, y=+9	144	38	Humus	25-35	Unidentified		Fragment		1	7,56	13		2					Present		
31433	Flooded	E	x=-2, y=+9	144	39	Humus	25-35	Unidentified		Fragment		1	1,23	35		1					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	40	Humus	25-35	Unidentified		Fragment		1	5,06	45		1					Present		
31433	Flooded	E	x=-2, y=+9	144	41	Reddish peat	35-45	Equus caballus	Os costae	Complete 40%	Sin.	1	32,54	125		2	Present		Cut		Present	Present	
31433	Flooded	E	x=-2, y=+9	144	42	Reddish peat	35-45	Unidentified		Fragment		1	7,03	35		1		Punctering			Present		
31433	Flooded	E	x=-2, y=+9	144	43	Reddish peat	35-45	Equus caballus	Metapod II	Complete 95%	Dex.	1	10,9	13	Rounding	3	Present	Chew, gnaw, pitting					
31433	Flooded	E	x=-2, y=+9	144	44	Reddish peat	35-45	Unidentified		Fragment		1	5,33	45		1					Present		
31433	Flooded	E	x=-2, y=+9	144	45	Reddish peat	35-45	Unidentified		Fragment		1	3,95	8		1		Chew					
31433	Flooded	E	x=-2, y=+9	144	46	Reddish peat	35-45	Unidentified		Fragment		1	1,1	35		1	Present		Cut				
31433	Flooded	E	x=-2, y=+9	144	47	Reddish peat	35-45	Unidentified		Fragment		1	0,76	3		3						Present	
31433	Flooded	E	x=-2, y=+9	144	48	Reddish peat	35-45	Unidentified		Fragment		1	3,34	8		1			Cut		Present		
31433	Flooded	E	x=-2, y=+9	144	49	Reddish peat	35-45	Unidentified		Fragment		1	1,38	4		1	Present						
31433	Flooded	E	x=-2, y=+9	144	50	Reddish peat	35-45	Unidentified		Fragment		1	1,13	3		1			Cut			Present	
31433	Flooded	E	x=-2, y=+9	144	51	Reddish peat	35-45	Equus caballus	Pars petrosa	Complete		1	22,68	6	Rounding and polishing	1					Present		
31433	Flooded	E	x=-2, y=+9	144	52	Reddish peat	35-45	Unidentified		Fragment		1	3,01	55		1		Pitting				Present	
31433	Flooded	E	x=-2, y=+9	144	53	Reddish peat	35-45	Equus caballus	Phalanx I	Complete 80% (prox.)		1	34,97	65		2	Present	Chew	Cut			Present	
31433	Flooded	E	x=-2, y=+9	144	54	Reddish peat	35-45	Equus caballus	Astragalus	Complete	Dex.	1	51,43	7		3						Present	
31433	Flooded	E	x=-2, y=+9	144	55	Reddish peat	35-45	Unidentified		Fragment		1	0,71	25		1					Present		
31433	Flooded	E	x=-2, y=+9	144	56	Reddish peat	35-45	Unidentified		Fragment		1	0,58	2	Rounding and polishing	1							
31433	Flooded	E	x=-2, y=+9	144	57	Reddish peat	35-45	Unidentified		Fragment		1	0,77	25		1							
31433	Flooded	E	x=-2, y=+9	144	58	Reddish peat	35-45	Unidentified		Fragment		1	18,16	11		2	Present		Cut		Present		
31433	Flooded	E	x=-2, y=+9	144	59	Reddish peat	35-45	Equus caballus	Os sesamoideum	Complete		1	4,69	25		3							
31433	Flooded	E	x=-2, y=+9	144	60	Reddish peat	35-45	Unidentified		Fragment		1	2,4	35		4						Present	
31433	Flooded	E	x=-2, y=+9	144	61	Reddish peat	35-45	Unidentified		Fragment		1	2,32	3		1					Present		
31433	Flooded	E	x=-2, y=+9	144	62	Reddish peat	35-45	Equus caballus	Os costae	Complete 80%	Sin.	1	27,96	215		3	Present		Cut		Present		
31433	Flooded	E	x=-2, y=+9	144	63	Reddish peat	35-45	Unidentified		Fragment		1	0,86	25		1							
31433	Flooded	E	x=-2, y=+9	144	64	Reddish peat	35-45	Unidentified		Fragment		1	1,24	35		1	Present						
31433	Flooded	E	x=-2, y=+9	144	65	Reddish peat	35-45	Unidentified		Fragment		1	0,51	25		1					Present		
31433	Flooded	E	x=-2, y=+9	144	66	Reddish peat	35-45	Equus caballus	Astragalus	Complete	Dex.	1	68,76	75		3						Present	
31433	Flooded	E	x=-2, y=+9	144	67	Reddish peat	35-45	Unidentified		Fragment		1	1,24	4		1						Present	
31433	Flooded	E	x=-2, y=+9	144	68	Reddish peat	45-55	Unidentified		Fragment		1	10,9	145	Polishing	2	Present					Present	
31433	Flooded	E	x=-2, y=+9	144	69	Reddish peat	45-55	Unidentified		Fragment		1	8,3	135		2					Present	Present	
31433	Flooded	E	x=-2, y=+9	144	70	Reddish peat	45-55	Unidentified		Fragment		1	4,97	5		1			Cut		Present		
31433	Flooded	E	x=-2, y=+9	144	71	Reddish peat	45-55	Unidentified		Fragemnt		1	3,4	35		2		Pitting					
31433	Flooded	E	x=-2, y=+9	144	72	Reddish peat	45-55	Bos taurus	Dens	Fragmented crown		1	5,86	3		2							
31433	Flooded	E	x=-2, y=+9	144	73	Reddish peat	45-55	Equus caballus	Os costae	Capitulum costae (complete)		1	1,19	3		1							
31433	Flooded	E	x=-2, y=+9	144	74	Reddish peat	45-55	Unidentified		Fragment		1	1,01	25		1	Present						
31433	Flooded	E	x=-2, y=+9	144	75	Reddish peat	45-55	Unidentified		Fragment		1	0,3	3		1						Present	
31433	Flooded	E	x=-2, y=+9	144	76	Reddish peat	45-55	Unidentified		Fragment		1	0,85	3		1							
31433	Flooded	E	x=-2, y=+9	144	77	Reddish peat	45-55	Unidentified		Fragment		1	0,79	2	Rounding	1							
31433	Flooded	E	x=-2, y=+9	144	78	Reddish peat	45-55	Unidentified		Fragment		1	1,06	25	Rounding	1					Present		
31433	Flooded	E	x=-2, y=+9	144	79	Reddish peat	45-55	Unidentified		Fragment		1	0,33	2		3							
31433	Flooded	E	x=-2, y=+9	144	80	Lime mud	55-65	Unidentified		Fragment		1	1,55	4		1							
31433	Flooded	E	x=-2, y=+9	144	81	Lime mud	55-65	Unidentified		Fragment		1	11,15	35	Rounding	2	Present						
31433	Flooded	E	x=-2, y=+9	144	82	Lime mud	55-65	Bos taurus	Ulna	Olecranon (complete)	Sin.	1	33,55	8		1	Present		Scraping				
31433	Flooded	E	x=-2, y=+9	144	83	Lime mud	55-65	Bos taurus	Os mandibulae	Corpus mandibulae (complete 30%)	Sin.	1	43,64	155	Rounding and polishing	3	Present	Chew	Chop	Yes			
31433	Flooded	E	x=-3, y=+9	145	1	Humus	25-35	Equus caballus	Phalanx II	Complete		1	31,67	45		3					Present		
31433	Flooded	E	x=-3, y=+9	145	2	Humus	25-35	Unidentified		Fragment		1	0,74	25		2							
31433	Flooded	E	x=-3, y=+9	145	3	Humus	25-35	Equus caballus	Os costae	Complete 30%	Sin.	1	14,55	12		2	Present			Yes	Present		
31433	Flooded	E	x=-3, y=+9	145	4	Humus	25-35	Unidentified		Fragment		1	3,08	65		2	Present			Yes	Present		
31433	Flooded	E	x=-3, y=+9	145	5	Humus	25-35	Unidentified		Fragment		2	1,24	3		3				Yes			
31433	Flooded	E	x=-3, y=+9	145	6	Humus	25-35	Unidentified		Fragment		1	6,77	45		1	Present					Present	
31433	Flooded	E	x=-3, y=+9	145	7	Humus	25-35	Unidentified		Fragment		1	3,84	45		3	Present						
31433	Flooded	E	x=-3, y=+9	145	8	Humus	25-35	Unidentified		Fragment		1	1,68	3	Rounding	3	Present				Present		
31433	Flooded	E	x=-3, y=+9	145	9	Humus	25-35	Equus caballus	Os sesamoideum	Complete		1	5,25	25		2							
31433	Flooded	E	x=-3, y=+9	145	10	Reddish peat	35-45	Unidentified		Fragment		1	2,96	4		2	Present						
31433	Flooded	E	x=-3, y=+9	145	11	Reddish peat	35-45	Unidentified		Fragment		1	2,59	35		1							
31433	Flooded	E	x=-3, y=+9	145	12	Reddish peat	35-45	Unidentified		Fragment		1	3,02	4		1							
31433	Flooded	E	x=-3, y=+9	145	13	Reddish peat	35-45	Unidentified		Fragment		1	0,47	3		1	Present						
31433	Flooded	E	x=-3, y=+9	145	14	Reddish peat	35-45	Unidentified		Fragment		1	0,27	15		2							
31433	Flooded	E	x=-3, y=+9	145	15	Reddish peat	45-55	Unidentified		Fragment		1	3,27	35		1							
31433	Flooded	E	x=-3, y=+9	145	16	Reddish peat	45-55	Unidentified		Fragment		1	2,55	3		1							
31433	Flooded	E	x=-3, y=+9	145	17	Reddish peat	45-55	Unidentified		Fragment		1	1,5	25		1							
31433	Flooded	E	x=-3, y=+9	145	18	Reddish peat	45-55	Unidentified		Fragment		1	0,85	2		3						Present	Recent damage
31433	Flooded	E	x=-3, y=+9	145	19	Lime mud	55-65	Unidentified		Fragment		1	0,68	2	Rounding	1							
31433	Flooded	E	x=-3, y=+9	145	20	Lime mud	55-65	Unidentified		Fragment		1	2,13	25	Rounding	1		Chew					
31433	Flooded	E	x=-3, y=+9	145	21	Lime mud	55-65	Unidentified		Fragment		1	0,99	2		3							
31433	Flooded	E	x=-3, y=+9	145	22	Lime mud	55-65	Unidentified		Fragment		1	10,57	4		3							
31433	Flooded	E	x=-3, y=+9	145	23	Lime mud	55-65	Bos taurus	Os scapulae	Fragment	Sin.	1	57,12	135	Rounding and polishing	2	Present	Chew	Chop				
31433	Flooded	E	x=-3, y=+9	145	24	Lime mud	55-65	Bos taurus	Os scapulae	Fragment	Sin.	1	89,82	155		3	Present	Gnaw, chew, pitting	Cut		Present		
31433	Flooded	E	x=-4, y=+9	146	1	Humus	25-35	Sus sp.	Os carpi intermedium	Complete	Dex.	1	1,78	2		3							
31433	Flooded	E	x=-4, y=+9	146	2	Humus	25-35	Unidentified		Fragment		1	1,97	25		3							
31433	Flooded	E	x=-4, y=+9	146	3	Humus	25-35	Unidentified		Fragment		2	3,82	4		3			Cut			Present	
31433	Flooded	E	x=-4, y=+9	146	4	Humus	25-35	Ovis aries/Capra hircus	Vertebrae	Fragment		1	5	35		3		Gnaw					
31433	Flooded	E	x=-4, y=+9	146	5	Humus	25-35	Unidentified		Fragment		1	4,44	45	Rounding and polishing	1							
31433	Flooded	E	x=-4, y=+9	146	6	Humus	25-35	Unidentified		Fragment		1	8,74	6		3					Present		
31433	Flooded	E	x=-4, y=+9	146	7	Reddish peat	35-45	Unidentified		Fragment		1	0,47	25		1			Chop				
31433	Flooded	E	x=-4, y=+9	146	8	Reddish peat	35-45	Unidentified		Fragment		1	6,4	65	Rounding and polishing	1	Present		Cut		Present		
31433	Flooded	E	x=-4, y=+9	146	9	Reddish peat	35-45	Unidentified		Fragment		1	0,23	2		1							
31433	Flooded	E	x=-4, y=+9	146	10	Reddish peat	35-45	Canis familiaris	Os sesamoideum	Complete		1	0,39	1		1							
31433	Flooded	E	x=-4, y=+9	146	11	Reddish peat	35-45	Unidentified		Fragment		2	0,56	25		1							
31433	Flooded	E	x=-4, y=+9	146	12	Reddish peat	35-45	Unidentified		Fragment		1	2,69	45		1	Present						
31433	Flooded	E	x=-4, y=+9	146	13	Reddish peat	35-45	Canis familiaris	Os costae	Corpus costae (complete 50%)		1	0,96	5		2	Present	Pitting, gnaw					
31433	Flooded	E	x=-4, y=+9	146	14	Reddish peat	35-45	Canis familiaris	Tibia + fibula	Tibia (complete), fibula (complete 50%)	Dex.	1	52,04	195		2	Present		Scraping		Present		Pathology
31433	Flooded	E	x=-4, y=+9	146	15	Reddish peat	45-55	Unidentified		Fragment		1	0,27	25		1							
31433	Flooded	E	x=-4, y=+9	146	16	Reddish peat	45-55	Unidentified		Fragment		1	1,44	35		3							
31433	Flooded	E	x=-4, y=+9	146	17 & 18	Reddish peat	45-55	Canis familiaris	Cranium	Os temporale (complete) & os occipitale (complete 30%)		2	4,75	45		1						Present	Glude togehter
31433	Flooded	E	x=-4, y=+9	146	19	Lime mud	55-65	Unidentified		Frament		1	3,74	5	Rounding and polishing	1	Present						
31433	Flooded	E	x=-5, y=+9	147	1	Humus	25-35	Ovis aries/Capra hircus	Phalanx I	Prox. epiphysis		1	0,47	15		3							
31433	Flooded	E	x=-5, y=+9	147	2	Humus	25-35	Unidentified		Fragment		1	1,38	45		1	Present	Scraping			Present		
31433	Flooded	E	x=-5, y=+9	147	3	Humus	25-35	Unidentified		Fragment		1	1,21	3		1	Present		Cut				
31433	Flooded	E	x=-5, y=+9	147	4	Humus	25-35	Unidentified		Fragment		1	0,45	25		1							
31433	Flooded	E	x=-5, y=+9	147	5	Humus	25-35	Unidentified		Fragment		1	2,49	4	Rounding	3	Present						
31433	Flooded	E	x=-5, y=+9	147	6	Humus	25-35	Unidentified		Fragment		1	1,72	25	Rounding	2							
31433	Flooded	E	x=-5, y=+9	147	7	Humus	25-35	Unidentified		Fragment		1	2,06	25		1	Present		Cut		Present		
31433	Flooded	E	x=-5, y=+9	147	8	Humus	25-35	Ovis aries/Capra hircus	Os costae	Complete 50%		1	2,42	75		3							
31433	Flooded	E	x=-5, y=+9	147	9	Humus	25-35	Ovis aries/Capra hircus	Os costae	Collum costae, facies articularis & collum costae (complete)		1	1,28	45		2			Cut		Present		
31433	Flooded	E	x=-5, y=+9	147	10	Reddish peat	35-45	Canis familiaris	Fibula	Complete 40% (prox.)		1	1,03	5		3							
31433	Flooded	E	x=-5, y=+9	147	11	Reddish peat	35-45	Canis familiaris	Dens	dp4-; crown (complete), root (complete 50%)		1	0,36	1		1							
31433	Flooded	E	x=-5, y=+9	147	12	Reddish peat	35-45	Unidentified		Fragment		1	0,98	2	Rounding and polishing	3			Chop	Yes	Present		
31433	Flooded	E	x=-5, y=+9	147	13	Reddish peat	35-45	Canis familiaris	Os mandibulae	Angulus mandibulae (complete), corpus mandibulae (40%)	Dex.	1	10,43	7		2	Present		Scraping				
31433	Flooded	E	x=-5, y=+9	147	14	Reddish peat	35-45	Canis familiaris	Os mandibulae	Angulus mandibulae (complete), corpus mandibulae (80%)	Sin.	1	16,46	115		2	Present				Present		
31433	Flooded	E	x=-5, y=+9	147	15	Reddish peat	45-55	Unidentified		Fragment		1	0,34	25		2							
31433	Flooded	E	x=-5, y=+9	147	16	Reddish peat	45-55	Unidentified		Fragment		1	4,7	4	Rounding and polishing	3	Present	Gnaw	Cut				
31433	Flooded	E	x=-5, y=+9	147	17	Lime mud	55-65	Unidentified		Fragment		1	14,18	85	Rounding and polishing	1	Present		Cut	Yes			
31433	Flooded	E	X=-6, y=+9	148	1	Reddish peat	35-45	Unidentified		Fragment		1	2,06	2		2							
31433	Flooded	E	X=-6, y=+9	148	2	Lime mud	55-65	Unidentified		Fragment		1	3,49	35		3							
31433	Flooded	E	X=-6, y=+9	148	3	Lime mud	55-65	Unidentified		Fragment		1	9,86	65	Rounding	1		Gnaw, Schewing	Chop	Yes			
31433	Flooded	E	x=-7, y=+9	149	1	Humus	25-35	Unidentified		Fragment		1	13,14	55		2		Pitting					
31433	Flooded	E	x=-7, y=+9	149	2	Humus	25-35	Unidentified		Fragment		1	0,49	15		3							
31433	Flooded	E	x=-7, y=+9	149	3	Humus	25-35	Unidentified		Fragment		1	9,05	6		3	Present		Cut		Present		
31433	Flooded	E	x=-7, y=+9	149	4	Reddish peat	35-45	Unidentified		Fragment		1	12,14	9		2	Present		Chop				
31433	Flooded	E	x=-7, y=+9	149	5	Reddish peat	35-45	Unidentified		Fragment		1	7,43	7	Rounding and polishing	1	Present		Chop, cut				
31433	Flooded	E	x=-7, y=+9	149	6	Reddish peat	35-45	Unidentified		Fragment		1	9,61	9		2	Present	Gnaw, pitting	Cut		Present	Present	
31433	Flooded	E	x=-7, y=+9	149	7	Lime mud	55-65	Bos taurus	Metapod	Diafys 35%		1	35,39	115	Rounding	2	Present	Gnaw	Cut, scraping	Yes			
31433	Flooded	E	x=-7, y=+9	149	8	Lime mud	55-65	Unidentified		Fragment		1	0,5	2		1	Present					Present	
31433	Flooded	E	x=-7, y=+9	149	9	Lime mud	55-65	Bos taurus	Mandibula	Corpus mandibulae (complete 50%)	Dex.	1	75,03	135		2	Present	Gnaw, chew	Chop, cut	Yes	Present		
31433	Flooded	E	x=-8, y=+9	150	1	Humus	25-35	Unidentified		Fragment		1	0,82	15	Rounding	2	Present						
31433	Flooded	E	x=-8, y=+9	150	2	Humus	25-35	Unidentified		Fragment		1	0,65	35		1			Cut		Present	Present	
31433	Flooded	E	x=-8, y=+9	150	3	Humus	25-35	Unidentified		Fragment		1	1,37			3							
31433	Flooded	E	x=-8, y=+9	150	4	Humus	25-35	Unidentified		Fragment		1	10,59	11		3	Present				Present		
31433	Flooded	E	x=-8, y=+9	150	5	Humus	25-35	Unidentified		Fragment		1	21,64	7		3					Present		
31433	Flooded	E	x=-8, y=+9	150	6	Reddish peat	35-45	Unidentified		Fragment		1	5,42	5		3							
31433	Flooded	E	x=-8, y=+9	150	7	Reddish peat	35-45	Unidentified		Fragment		1	24,34	115		2	Present	Gnaw					
31433	Flooded	E	x=-8, y=+9	150	8	Reddish peat	35-45	Unidentified		Fragment		1	5,44	5		3					Present		
31433	Flooded	E	x=-8, y=+9	150	9	Reddish peat	35-45	Unidentified		Fragment		1	0,35	25		1			Scraping				
31433	Flooded	E	x=-8, y=+9	150	10	Reddish peat	35-45	Unidentified		Fragment		1	19,84	13	Rounding and polishing	Not applicable	Present	Gnaw	Blow	Yes			
31433	Flooded	E	x=-8, y=+9	150	11	Reddish peat	35-45	Bos taurus	Dens	m3+		1	27,4	5	Polishing	2							
31433	Flooded	E	x=-8, y=+9	150	12	Reddish peat	35-45	Unidentified		Fragment		1	14,4	6		3		Gnaw					
31433	Flooded	E	x=-8, y=+9	150	13	Reddish peat	45-55	Equus caballus	Phalanx I	Complete 80% (prox.)	Sin.	1	48,88	7		2		Gnae, chew	Cut		Present		
31433	Flooded	E	x=-8, y=+9	150	14	Lime mud	55-65	Unidentified		Fragment		1	28,36	145	Rounding and polishing	1	Present		Cut, blow	Yes			
31433	Flooded	E	x=-8, y=+9	150	15	Lime mud	55-65	Unidentified		Fragment		1	2,47	45	Polishing	1	Present		Cut				
31433	Flooded	E	x=-8, y=+9	150	16	Lime mud	55-65	Unidentified		Fragment		1	18,74	10		1		Gnaw					
31433	Flooded	E	x=-8, y=+9	150	17	Lime mud	55-65	Unidentified		Fragment		1	32,72	11	Rounding	3	Present						
31433	Flooded	E	x=-8, y=+9	150	18	Lime mud	55-65	Ovis aries	Tibia	Epiphysis		1	3,61	35		1					Present		
31433	Flooded	E	x=-8, y=+9	150	19	Lime mud	55-65	Unidentified		Fragment		1	4,09	4		1	Present			Yes			
31433	Flooded	E	x=-9, y=+9	151	1	Reddish peat	25-35	Bos taurus	Os scapulae	Fragment		1	57,81	155	Rounding	2	Present	Gnaw	Scraping		Present		
31433	Flooded	E	x=-9, y=+9	151	2	Reddish peat	25-35	Unidentified		Fragment		1	3,45	4		3	Present						
31433	Flooded	E	x=-9, y=+9	151	3	Reddish peat	25-35	Unidentified		Fragment		1	4,44	35		2	Present						
31433	Flooded	E	x=-9, y=+9	151	4	Reddish peat	25-35	Unidentified		Fragment		1	1,79	45		1		Gnaw					
31433	Flooded	E	x=-9, y=+9	151	5	Reddish peat	25-35	Unidentified		Fragment		1	1,2	45		1		Gnaw					
31433	Flooded	E	x=-9, y=+9	151	6	Reddish peat	25-35	Unidentified		Fragment		1	3,18	5		2		Puncturing					
31433	Flooded	E	x=-9, y=+9	151	7	Reddish peat	35-45	Canis familiaris	Os mandibulae	Proc. articularis	Dex.	1	2,45	35		1							
31433	Flooded	E	x=-9, y=+9	151	8	Reddish peat	45-55	Ovis aries	Os mandibulae + dens	Corpus mandibulae (complete 50%); dp2-, dp3- & dp4-	Dex.	1	10,6	8		1							
31433	Flooded	E	x=-9, y=+9	151	9	Lime mud	55-65	Unidentified		Fragment		1	4,51	6		3						Present	
31433	Flooded	E	x=-9, y=+9	151	10	Lime mud	55-65	Unidentified		Fragment		1	3,15	5	Rounding and polishing	Not applicable							
31433	Flooded	E	x=-9, y=+9	151	11	Sandy gravel (bottom)	65-	Unidentified		Fragment		1	2,41	75		2	Present	Gnaw, pitting					
31433	Flooded	E	x=-9, y=+9	151	12	Sandy gravel (bottom)	65-	Unidentified		Fragment		1	0,84	6		2	Present		Cut			Present	
31433	Flooded	E	x=-9, y=+9	151	13	Sandy gravel (bottom)	65-	Canis familiaris	Humerus	Diafys 80%	Dex.	1	7,8	9	Rounding and polishing	1	Present	Gnaw	Cut, blow				
31433	Flooded	E	x=-10, y=+9	152	1	Lime mud	45-65	Unidentified		Fragment		1	0,93	2	Rounding	3							
31433	Flooded	E	x=-10, y=+9	152	2	Lime mud	45-65	Unidentified		Fragment		1	1,41	4		2	Present						
31433	Flooded	E	x=-10, y=+9	152	3	Lime mud	45-65	Canis familiaris	Ulna	Diafys 95%	Dex.	1	7,12	11		2	Present		Blow				
31433	Flooded	E	x=-10, y=+9	152	4	Lime mud	45-65	Unidentified		Fragment		1	13,95	7	Rounding	1	Present						
31433	Flooded	E	x=-10, y=+9	152	5	Lime mud	45-65	Unidentified		Fragment		1	6,57	4	Rounding and polishing	Not applicable	Present				Present		
31433	Flooded	E	x=-10, y=+9	152	6	Sandy gravel (bottom)	65-	Unidentified		Fragment		1	0,39	2	Rounding	1	Present						

LUHM	Area	Zone	Coordinates	Square nr.	Find nr.	Layer	Depth (cm)	Species	Element	Part	Side	Quantity	Weight (g)	Measurment (mm)	Abrasion	Weathering (Boethius)	Trampling	Gnaw-marks	Butchery-marks	Marrow split	Root etched	Recent damage	Notes
31433	Flooded	E	x=-10, y=+9	152	7	Sandy gravel (bottom)	65-	Unidentified		Fragment		1	1,17	2		1							
31433	Flooded	E	x=-10, y=+9	152	8	Sandy gravel (bottom)	65-	Unidentified		Fragment		1	1,69	3		3							
31433	Flooded	E	x=-10, y=+9	152	9	Reddish peat	(-113)	Unidentified		Fragment		1	5,02	5	Rounding	3							
31433	Flooded	E	x=-13, y=+9	155	1	Swim turf	25-35	Unidentified		Fragment		1	6,78	7		1		Chew			Present		
31433	Flooded	E	x=-13, y=+9	155	2	Sand	35-45	Unidentified		Fragment		1	0,24	15		1							
31433	Flooded	E	x=-13, y=+9	155	3	Sandy gravel (bottom)	45-	Bos taurus	Os mandibulae + dens	Corpus mandibulae (complete), angulus mandibulae (complete 5%); p2-, p3-, p4-, m1- & m2-	Sin.	3	126	215		3	Present		Cut				
31433	Flooded	E	x=-13, y=+9	155	4	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	4,16	6		1	Present		Scraping		Present		
31433	Flooded	E	x=-13, y=+9	155	5	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	4,98	35		1							
31433	Flooded	E	x=-13, y=+9	155	6	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	6,29	85		1	Present		Cut	Yes			
31433	Flooded	E	x=-13, y=+9	155	7	Sandy gravel (bottom)	45-	Bos taurus	Os costae	Complete 55%		1	9,1	11		2	Present		Chop, cut		Present		
31433	Flooded	E	x=-13, y=+9	155	8	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	7,18	5		2			Cut				
31433	Flooded	E	x=-13, y=+9	155	9	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	13,31	115		2					Present		
31433	Flooded	E	x=-13, y=+9	155	10	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	11,01	75		2	Present				Present		
31433	Flooded	E	x=-13, y=+9	155	11	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	11,76	65		2	Present	Gnaw		Yes			
31433	Flooded	E	x=-13, y=+9	155	12	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	4,26	5		2							
31433	Flooded	E	x=-13, y=+9	155	13	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	3,52	5		1				Yes			
31433	Flooded	E	x=-13, y=+9	155	14	Sandy gravel (bottom)	45-	Bos taurus	Os mandibulae	Proc. articularis (complete), proc. coracoideus (complete 45%)	Sin.	1	18,73	8		3							
31433	Flooded	E	x=-13, y=+9	155	15	Sandy gravel (bottom)	45-	Unidentified		Fragment		1	28,29	11	Rounding	2	Present	Chew, gnaw					
31433	Outside	E	x=-14, y=+9	156	1	Swim turf	25-35	Unidentified		Fragment		1	10,24	95		4				Yes			
31433	Outside	E	x=-17, y=+9	157	1	Sand	25-35	Bos taurus	Phalanx II	Complete		1	13,84	4		2	Present						
31433	Outside	E	x=-17, y=+9	157	2	Sand	25-35	Unidentified		Fragment		1	11,59	6	Polishing	2			Cut	Yes			
31433	Outside	E	x=-18, y=+9	158	1	Sandy gravel (bottom)	35-	Unidentified		Fragment		1	10,19	7	Rounding and polishing	Not applicable	Present	Chew					
31433	Outside	E	x=-18, y=+9	158	2	Sandy gravel (bottom)	35-	Unidentified		Fragment		1	9,28	55	Rounding and polishing	3		Gnaw	Chop, cut	Yes			
31433	Outside	E	x=-19, y=+9	159	1	Sandy gravel (bottom)	30-	Bos taurus	Os carpi radiale	Complete		1	8,23	3	Rounding	Not applicable					Present		
31433	Outside	E	x=-20, y=+9	160	1 & 6	Sandy gravel (bottom)	25-	Bos taurus	Os scapulae	Complete 50%	Sin.	2	34,8	10	Rounding	3	Present	Chew, gnaw, pitting					Number 1 and 6 have been glued together
31433	Outside	E	x=-20, y=+9	160	2	Sandy gravel (bottom)	25-	Unidentified		Fragment		1	1,43	25	Rounding and polishing	Not applicable							
31433	Outside	E	x=-20, y=+9	160	3 & 5	Sandy gravel (bottom)	25-	Unidentified		Fragment		2	12,28	95		3	Present			Yes	Present		Number 3 and 5 have been glued together
31433	Outside	E	x=-20, y=+9	160	4	Sandy gravel (bottom)	25-	Unidentified		Fragment		1	0,4	25		2							
31433	Outside	E	x=-21, y=+9	161	1	Sandy gravel (bottom)	30-	Unidentified		Fragment		1	15,9	6	Rounding and polishing	Not applicable		Chew, gnaw			Present		
31433	Outside	E	x=-22, y=+9	162	1	Sandy gravel (bottom)	35-	Unidentified		Fragment		1	9,39	75	Rounding and polishing	Not applicable	Present				Present		
31433	Outside	E	x=-22, y=+9	162	2	Sandy gravel (bottom)	35-	Unidentified		Fragment		1	6,48	6	Rounding	2	Present		Chop	Yes			
31433	Outside	E	x=-22, y=+9	162	3	Sandy gravel (bottom)	35-	Unidentified		Fragment		1	1,01	2	Rounding	2							
31433	Flooded	W	x=+7, y=0	11	1	Grey mud	45-65	Equus caballus	Metatarsal II	Complete	Dex.	1	8,1	12		3					Present		
31433	Flooded	W	x=+7, y=0	11	2	Reddish mud	25-35	Equus caballus	Calcaneus	Complete 80%	Sin.	1	48,47	10		3		Scraping					
31433	Flooded	W	x=+7, y=0	11	3	Reddish mud	25-35	Canis familiaris	Atlas	Fragment		1	3,44	3		1			Chopped off			Present	
31433	Flooded	W	x=+7, y=0	11	4	Reddish mud	35-45	Bos taurus	Humerus	Fossa coronoidea	Dex.	1	17,94	5	Rounding and polishing	4			Blow	Yes	Present		
31433	Flooded	W	x=+7, y=0	11	5	Grey mud	45-65	Phocidae sp.	Os sacrum	Fragment		1	41,95	115	Rounding and polishing	Not applicable			Chooped off		Present	Present	
31433	Flooded	W	x=+7, y=0	11	6	Grey mud	45-65	Equus caballus	Vertebrae cervecale VII	Complete 80%		1	102,89	9		3							
31433	Flooded	W	x=+7, y=0	11	7	Grey mud	45-65	Phocidae sp.	Femur	Complete	Dex.	1	91,79	12	Rounding and polishing	Not applicable	Present		Cut, scraping				
31433	Flooded	W	x=+7, y=0	11	10	Grey mud	45-65	Equus caballus	Phalanx I	Complete		1	56	75		3	Present		Cut				
31433	Flooded	W	x=+7, y=0	11	11	Grey mud	45-65	Unidentified		Fragment		1	12,45	55		3							
31433	Flooded	W	x=+7, y=0	11	12	Grey mud	45-65	Phocidae sp.	Os sacrum	Fragment		1	85,23	105		Not applicable							
31433	Flooded	W	x=+7, y=0	11	13	Grey mud	45-65	Phocidae sp.	Vertebrae	Complete 70%		1	14,94	45	Polishing	Not applicable							
31433	Flooded	W	x=+7, y=0	11	14	Grey mud	45-65	Equus caballus	Vertebrae lumbale	Complete 60%		1	50,41	10		3					Present		
31433	Flooded	W	x=+7, y=0	11	15	Grey mud	45-65	Phocidae sp.	Vertebrae lumbale	Complete 70%		1	72,11	85	Polishing	1	Present		Cut		Present		
31433	Flooded	W	x=+7, y=0	11	16	Grey mud	45-65	Phocidae sp.	Vertebrae thoracicae	Complete 70%		1	60	65	Polishing	1					Present		
31433	Flooded	W	x=+7, y=0	11	17	Grey mud	45-65	Phocidae sp.	Fibula	Complete 40%		1	36,33	8	Polishing	Not applicable	Present	Scraping	Cut, scraping				
31433	Flooded	W	x=+7, y=0	11	18	Grey mud	45-65	Unidentified		Fragment		1	8,86	8	Polishing	Not applicable							
31433	Flooded	W	x=+7, y=0	11	19	Grey mud	45-65	Unidentified		Fragment		1	6,08	10		1	Present		Cut, scraping	Yes			
31433	Flooded	W	x=+0,5, y=-0	58	1	Disturbed by plough	0-25	Unidentified		Fragment		1	47,6	135	Rounding and polishing	Not applicable	Present		Cut, chop	Yes			
31433	Flooded	W	x=+0,5, y=-0	58	2	Reddish mud	25-35	Equus caballus	Humerus	Diafys (complete 90%)	Dex.	1	248,08	18	Rounding	3	Present	Gnaw, chew, pitting	Cut, scraping				
31433	Flooded	W	x=+0,5, y=-0	58	3	Reddish mud	25-35	Unidentified		Fragment		1	1,29	35		2							
31433	Flooded	W	x=+0,5, y=-0	58	4	Reddish mud	25-35	Unidentified		Fragment		1	0,95	45		3							
31433	Flooded	W	x=+0,5, y=-0	58	5	Reddish mud	25-35	Bos taurus	Dens	M1+	Sin.	1	28,74	5		1							
31433	Flooded	W	x=+0,5, y=-0	58	6	Reddish mud	25-35	Equus caballus	Os carpale tertium	Complete	Sin.	1	15,24	45		3							
31433	Flooded	W	x=+0,5, y=-0	58	7	Reddish mud	25-35	Unidentified		Fragment		1	2,37	4		2							
31433	Flooded	W	x=+0,5, y=-0	58	8	Reddish mud	25-35	Unidentified		Fragment		1	6,57	4		1			Cut				
31433	Flooded	W	x=+0,5, y=-0	58	9	Reddish mud	25-35	Unidentified		Fragment		1	0,29	25		1							
31433	Flooded	W	x=+0,5, y=-0	58	10	Reddish peat	45-55	Ovis aries	Femur	Complete	Dex.	1	20,55	135		2							
31433	Flooded	W	x=+0,5, y=-0	58	11	Reddish peat	45-55	Equus caballus	Phalanx III	Complete		1	13,41	5		3							
31433	Flooded	W	x=+0,5, y=-0	58	12	Reddish peat	45-55	Unidentified		Fragment		1	1,59	4		1							
31433	Flooded	W	x=+0,5, y=-0	58	13	Reddish peat	45-55	Ovis aries/Capra hircus	Os costae	Collum costae 70%	Sin.	1	1,98	7		2			Chop				
31433	Flooded	W	x=+0,5, y=-0	58	14	Grey mud	55-75	Bos taurus	Tibia	Diafys (complete 50%)	Dex.	1	78,64	14	Rounding	3	Present						
31433	Flooded	W	x=+0,5, y=-0	58	15	Grey mud	55-75	Ovis aries	Os coxae	Os illium 90%, acetabulum (complete), os ichium 80%, os pubis 40%	Dex.	1	15,95	14		3	Present						
31433	Flooded	W	x=+0,5, y=-0	58	16	Grey mud	55-75	Unidentified		Fragment		1	3,54	65		1			Cut, scraping				
31433	Flooded	W	x=+0,5, y=-0	58	17	Grey mud	55-75	Canis familiaris	Metatarsale IV	Complete 80%	Sin.	1	3,67	75		2				Yes			
31433	Flooded	W	x=+0,5, y=-0	58	18	Grey mud	55-75	Unidentified		Fragment		1	17,23	95		2		Gnaw, chew		Yes			
31433	Flooded	W	x=+0,5, y=-0	58	19	Grey mud	55-75	Unidentified		Fragment		1	0,57	2		3							
31433	Flooded	W	x=+0,5, y=-0	58	20	Grey mud	55-75	Ovis aries	Calcaneus	Complete	Dex.	1	6,36	55		3		Pitting, puncturing					
31433	Flooded	W	x=+0,5, y=-0	58	21	Grey mud	55-75	Canis familiaris	Os maxillare + dens	Maxilla (complete 60%); dp2+, dp3+ & dp4+	Sin.	1	4,6	45		2							
31433	Flooded	W	x=+0,5, y=-0	58	22	Grey mud	55-75	Bos taurus	Tibia	Epiphysis 70%	Dex.	1	21,21	6		1			Chop				
31433	Flooded	W	x=+0,5, y=-0	58	23	Grey mud	55-75	Ovis aries	Os coxae	Os illium 90%, acetabulum (complete), os ichium 80%	Sin.	1	15,45	15		2			Cut				
31433	Flooded	W	x=+1, y=-0	59	1	Reddish mud or reddish peat	20-50	Equus caballus	Dens	dp2+		1	14,2	35		2							
31433	Flooded	W	x=+1, y=-0	59	2	Reddish mud or reddish peat	20-50	Canis familiaris	Vertebrae thoracicae	Complete		1	5,22	4		2							
31433	Flooded	W	x=+1, y=-0	59	3	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	0,59	15	Polishing	1							
31433	Flooded	W	x=+1, y=-0	59	4	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	0,84	25		2							
31433	Flooded	W	x=+1, y=-0	59	5	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,16	4		3							Disturbed surface
31433	Flooded	W	x=+1, y=-0	59	6	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,29	35		2							
31433	Flooded	W	x=+1, y=-0	59	7	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	13,68	65		1							
31433	Flooded	W	x=+1, y=-0	59	8	Reddish mud or reddish peat	20-50	Equus caballus	Humerus	Diafys 40%		1	70,35	14	Rounding and polishing	Not applicable			Chop	Yes			
31433	Flooded	W	x=+1, y=-0	59	9	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	23,38	6		3							
31433	Flooded	W	x=+1, y=-0	59	9	Reddish mud or reddish peat	20-50	Canis familiaris	Vertebrae thoracicae	Complete		1	5,22	4		1							
31433	Flooded	W	x=+1, y=-0	59	10	Grey mud	50-75	Equus caballus	Patella	Fragmented	Dex.	1	20,03	6		4			Cut				
31433	Flooded	W	x=+1, y=-0	59	11	Grey mud	50-75	Bos taurus	Femur	Caput femoris		1	20,55	45		2		Chew, pitting					
31433	Flooded	W	x=+1, y=-0	59	12	Grey mud	50-75	Ovis aries	Vertebrae lumbale	Complete		1	10,74	7		1			Cut				
31433	Flooded	W	x=+1, y=-0	59	13	Grey mud	50-75	Ovis aries	Vertebrae lumbale	Complete 60%		1	3,78	35		3							
31433	Flooded	W	x=+1, y=-0	59	14	Grey mud	50-75	Canis familiaris	Vertebrae thoracicae	Complete 95%		1	6,06	3	Polishing	1							
31433	Flooded	W	x=+1, y=-0	59	15	Grey mud	50-75	Canis familiaris	Vertebrae	Epiphysis		1	0,46	2		1	Present						
31433	Flooded	W	x=+1, y=-0	59	16	Grey mud	50-75	Unidentified		Fragment		1	1,41	35		3							
31433	Flooded	W	x=+1, y=-0	59	17	Grey mud	50-75	Ovis aries	Ulna	Complete 50%		1	3,42	65		1							
31433	Flooded	W	x=+1, y=-0	59	18	Grey mud	50-75	Sus sp.	Dens	I		1	1,43	5		2							
31433	Flooded	W	x=+1, y=-0	59	19	Grey mud	50-75	Unidentified		Fragment		1	0,25	2		1						Present	
31433	Flooded	W	x=+1, y=-0	59	20	Grey mud	50-75	Ovis aries/Capra hircus	Os costae	Corpus costae 90%	Sin.	1	2,92	13		1							
31433	Flooded	W	x=+1, y=-0	59	21	Grey mud	50-75	Canis familiaris	Os costae I	Complete	Sin.	1	24	6		2							
31433	Flooded	W	x=+1, y=-0	59	22	Grey mud	50-75	Unidentified		Fragment		1	0,27	25		2							
31433	Flooded	W	x=+1, y=-0	59	23	Clayey gravel (bottom)	75-	Canis familiaris	Os mandibulae + dens	Mandibula (complete); p1-, p2-, p3-, p4- & m1-	Dex.	1	60,4	155		1	Present						Belongs to 26
31433	Flooded	W	x=+1, y=-0	59	24	Clayey gravel (bottom)	75-	Canis familiaris	Os maxillare + dens	Maxilla (complete); p4+ & m2+	Dex.	1	30,64	11		1							Belongs to 27, and 46
31433	Flooded	W	x=+1, y=-0	59	25	Clayey gravel (bottom)	75-	Bos taurus	Femur	Diafys (complete 10%), trochanter minor (complete)	Sin.	1	45,68	20		1				Yes			
31433	Flooded	W	x=+1, y=-0	59	26	Clayey gravel (bottom)	75-	Canis familiaris	Os mandibulae + dens	Mandibula (complete 95%); p1-, p2-, p3-, p4-, m1- & m2-	Sin.	1	54,47	145		1	Present						Belongs to 23
31433	Flooded	W	x=+1, y=-0	59	27 & 46	Clayey gravel (bottom)	75-	Canis familiaris	Cranium	Os nasale & os maxillare (complete); p2+, p3+, p4+ & m1+	Sin.	1	37,3	115		3	Present						Number 27 and 46 glued together, belongs to 24
31433	Flooded	W	x=+1, y=-0	59	28 & 30	Clayey gravel (bottom)	75-	Canis familiaris	Cranium	Os frontale (dex.); os frontale & os maxilla (sin.)	Sin. & dex.	2	25,45	95		1					Present		Number 28 and 30 have been glued toghether
31433	Flooded	W	x=+1, y=-0	59	29	Clayey gravel (bottom)	75-	Bos taurus	Humerus	Diafys (compelte 40%)		1	43,12	105		2	Present		Blow, scraping	Yes			
31433	Flooded	W	x=+1, y=-0	59	31	Clayey gravel (bottom)	75-	Canis familiaris	Radius	Complete 40%	Dex.	1	7,37	7		1	Present		Scraping				
31433	Flooded	W	x=+1, y=-0	59	32	Clayey gravel (bottom)	75-	Unidentified		Fragment		1	11,09	55	Rounding	1	Present			Yes			
31433	Flooded	W	x=+1, y=-0	59	33	Clayey gravel (bottom)	75-	Canis familiaris	Cranium	Os nasale	Dex.	1	2,25	8		1							
31433	Flooded	W	x=+1, y=-0	59	34	Clayey gravel (bottom)	75-	Ovis aries/Capra hircus	Tibia	Diafys (complete 70%)		1	15,66	135		1			Scraping	Yes			
31433	Flooded	W	x=+1, y=-0	59	35	Clayey gravel (bottom)	75-	Unidentified		Fragment		1	1,85	5		1				Yes			
31433	Flooded	W	x=+1, y=-0	59	36	Clayey gravel (bottom)	75-	Unidentified		Fragment		1	7,28	85		1			Chop				
31433	Flooded	W	x=+1, y=-0	59	37	Clayey gravel (bottom)	75-	Canis familiaris	Vertebrae lumbale	Complete 70%		1	6,53	35		2							
31433	Flooded	W	x=+1, y=-0	59	38	Clayey gravel (bottom)	75-	Unidentified		Fragment		1	12,4	65	Rounding	2	Present	Chew, scraping					
31433	Flooded	W	x=+1, y=-0	59	39	Clayey gravel (bottom)	75-	Unidentified	Metacarpus IV	Complete 50%		1	2,27	65		1							
31433	Flooded	W	x=+1, y=-0	59	40	Clayey gravel (bottom)	75-	Ovis aries/Capra hircus	Os costae	Complete 10%	Dex.	1	2,49	95		1			Cut, chop				
31433	Flooded	W	x=+1, y=-0	59	41	Clayey gravel (bottom)	75-	Canis familiaris	Cranium	Os temporale (complete 65%), fossa mandibulae (complete)	Sin.	1	8,47	4		1							
31433	Flooded	W	x=+1, y=-0	59	42	Clayey gravel (bottom)	75-	Canis familiaris	Metatarsale IV	Complete	Dex.	1	4,52	8		1							Pathology
31433	Flooded	W	x=+1, y=-0	59	43	Clayey gravel (bottom)	75-	Canis familiaris	Radius	Complete 20%	Sin.	1	5,79	6		2							
31433	Flooded	W	x=+1, y=-0	59	44	Clayey gravel (bottom)	75-	Canis familiaris	Vertebrae cervicale	Complete 90%		1	11,95	45		1							
31433	Flooded	W	x=+1, y=-0	59	45	Clayey gravel (bottom)	75-	Unidentified		Fragment		1	3,2	35		3							
31433	Flooded	W	x=+1, y=-0	59	47	Clayey gravel (bottom)	75-	Ovis aries/Capra hircus	Os costae	Corpus costae 90%	Sin.	1	1,63	11		1							
31433	Flooded	W	x=+1, y=-0	59	48	Clayey gravel (bottom)	75-	Canis familiaris	Cranium	Os temporale (complete 50%)	Dex.	1	7,68	6		1							
31433	Flooded	W	x=+1, y=-0	59	49	Clayey gravel (bottom)	75-	Canis familiaris	Os costae	Complete 80%	Sin.	1	4,05	10		1			Scraping				
31433	Flooded	W	x=+2, y=-0	60	1	Reddish mud or reddish peat	20-50	Equus caballus	Tibia	Fragment		1	26,27	9		3	Present			Yes			
31433	Flooded	W	x=+2, y=-0	60	2	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	13,66	85		1		Punctering	Blow		Present		
31433	Flooded	W	x=+2, y=-0	60	3	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	3,7	4		3							
31433	Flooded	W	x=+2, y=-0	60	4	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	2,51	3		3							
31433	Flooded	W	x=+2, y=-0	60	5	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,79	25		1						Present	
31433	Flooded	W	x=+2, y=-0	60	6	Reddish mud or reddish peat	20-50	Equus caballus	Os carpale tertium	Complete	Sin.	1	18,17	5		3							
31433	Flooded	W	x=+2, y=-0	60	7	Reddish mud or reddish peat	20-50	Equus caballus	Dens	m2+	Sin.	1	17,4	4		4							
31433	Flooded	W	x=+2, y=-0	60	8	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,21	35		1			Scraping				
31433	Flooded	W	x=+2, y=-0	60	9	Reddish mud or reddish peat	20-50	Ovis aries	Dens	m2-	Sin.	1	2,95	3		1							
31433	Flooded	W	x=+2, y=-0	60	10	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,87	5		2				Yes		Present	
31433	Flooded	W	x=+2, y=-0	60	11	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,47	2		3							
31433	Flooded	W	x=+2, y=-0	60	12	Reddish mud or reddish peat	20-50	Bos taurus	Os tarsi centrale	Complete	Dex.	3	2,41	25		3							
31433	Flooded	W	x=+2, y=-0	60	13	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,09	25		3							
31433	Flooded	W	x=+2, y=-0	60	14	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,71	3		3							
31433	Flooded	W	x=+2, y=-0	60	15	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	2,65	4		1							
31433	Flooded	W	x=+2, y=-0	60	16	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	9,98	8		1			Cut		Present		
31433	Flooded	W	x=+2, y=-0	60	17	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	0,51	2		1							
31433	Flooded	W	x=+2, y=-0	60	18	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	0,63	3		1					Present	Present	
31433	Flooded	W	x=+2, y=-0	60	19	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	0,84	3		1	Present						
31433	Flooded	W	x=+2, y=-0	60	20	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	0,49	35		3							
31433	Flooded	W	x=+2, y=-0	60	21	Reddish peat	50-75	Equus caballus	Os costae	Corpus costae 60%		1	17,26	145		3		Pitting	Cut, scraping		Present		
31433	Flooded	W	x=+2, y=-0	60	22	Reddish peat	50-75	Unidentified		Fragment		1	9,67	75	Rounding and polishing	Not applicable							
31433	Flooded	W	x=+2, y=-0	60	23	Reddish peat	50-75	Unidentified		Fragment		1	3,35	5	Polishing	1							
31433	Flooded	W	x=+2, y=-0	60	24	Reddish peat	50-75	Unidentified		Fragment		1	6,62	3	Polishing	Not applicable							
31433	Flooded	W	x=+2, y=-0	60	25	Reddish peat	50-75	Equus caballus	Os tarsi tertium	Complete	Sin.	1	7,68	45		1							
31433	Flooded	W	x=+2, y=-0	60	26	Reddish peat	50-75	Canis familiaris	Vertebrae cervicale	Complete 90%		1	7,32	5		1							
31433	Flooded	W	x=+2, y=-0	60	27	Reddish peat	50-75	Unidentified		Fragment		1	1,25	25		3							
31433	Flooded	W	x=+2, y=-0	60	28	Reddish peat	50-75	Unidentified		Fragment		1	3,37	45	Polishing	1	Present						
31433	Flooded	W	x=+2, y=-0	60	29	Reddish peat	50-75	Canis familiaris	Atlas	Complete 80%		1	15,68	7	Rounding and polishing	Not applicable					Present		
31433	Flooded	W	x=+2, y=-0	60	30	Reddish peat	50-75	Canis familiaris	Ulna	Diafys (complete 60%)		1	4	8		1	Present		Scraping				
31433	Flooded	W	x=+2, y=-0	60	31	Reddish peat	50-75	Bos taurus	Os coxae	Os ichium (complete 10%), acetabulum (complete 20%)	Sin.	1	38,55	7	Rounding and polishing	Not applicable		Chew, scraping	Chopped off				
31433	Flooded	W	x=+2, y=-0	60	32	Reddish peat	50-75	Bos taurus	Humerus	Diafys (complete 10%)	Sin.	1	41,33	11	Rounding and polishing	Not applicable			Blow	Yes			
31433	Flooded	W	x=+2, y=-0	60	33	Reddish peat	50-75	Unidentified		Fragment	Sin.	1	39,54	95	Rounding and polishing	Not applicable		Pitting	Blow, scraping	Yes			
31433	Flooded	W	x=+2, y=-0	60	34	Reddish peat	50-75	Equus caballus	Os coxae	Os illium (complete 70%)		1	30,02	10		1	Present	Gnaw, chew	Blow			Present	
31433	Flooded	W	x=+2, y=-0	60	35	Reddish peat	50-75	Canis familiaris	Ulna	Complete	Dex.	1	24,65	21	Polishing	1	Present		Scraping				
31433	Flooded	W	x=+3, y=-0	61	1	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	1,7	65		1			Scraping				
31433	Flooded	W	x=+3, y=-0	61	2	Reddish mud or reddish peat	20-50	Canis familiaris	Vertebrae thoracicae	Complete 90%		1	4,69	7		1							
31433	Flooded	W	x=+3, y=-0	61	3	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	6,99	45		3							
31433	Flooded	W	x=+3, y=-0	61	4	Reddish mud or reddish peat	20-50	Equus caballus	Os costae	Fragment		1	4,94	8		1	Present		Chop	Yes			
31433	Flooded	W	x=+3, y=-0	61	5	Reddish mud or reddish peat	20-50	Equus caballus	Os sesamoidem	Complete		1	5,34	3		3							
31433	Flooded	W	x=+3, y=-0	61	6	Reddish mud or reddish peat	20-50	Canis familiaris	Vertebrae cervicale	Complete 90%		1	6,92	4		1					Present		
31433	Flooded	W	x=+3, y=-0	61	7	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	13,32	65	Rounding and polishing	Not applicable							
31433	Flooded	W	x=+3, y=-0	61	8	Reddish mud or reddish peat	20-50	Equus caballus	Os tarsi tertium	Complete	Sin.	1	13,84	5		3							
31433	Flooded	W	x=+3, y=-0	61	9	Reddish mud or reddish peat	20-50	Equus caballus	Calcaneus	Fragment	Sin.	4	31,92	8		3							
31433	Flooded	W	x=+3, y=-0	61	10	Reddish mud or reddish peat	20-50	Ovis aries	Axsis	Complete 80%		1	11,67	5		3							
31433	Flooded	W	x=+3, y=-0	61	11	Reddish mud or reddish peat	20-50	Equus caballus	Radius	Epiphysis (dist.)	Sin.	1	64,44	8		2							
31433	Flooded	W	x=+3, y=-0	61	12	Reddish mud or reddish peat	20-50	Unidentified		Fragment		1	20,79	7		1	Present		Scraping				
31433	Flooded	W	x=+3, y=-0	61	13	Reddish mud or reddish peat	20-50	Equus caballus	Phalanx II	Complete		1	38,21	55		3		Pitting				Present	
31433	Flooded	W	x=+3, y=-0	61	14	Reddish mud or reddish peat	20-50	Equus caballus	Os carpi radiale	Complete	Sin.	1	20,34	45		2							
31433	Flooded	W	x=+3, y=-0	61	15	Reddish mud or reddish peat	20-50	Equus caballus	Dens	P2+	Sin.	1	77,08	85		1							
31433	Flooded	W	x=+3, y=-0	61	16	Reddish peat	50-75	Unidentified		Fragment		1	1,2	3	Polishing	1							
31433	Flooded	W	x=+3, y=-0	61	17	Reddish peat	50-75	Canis familiaris	Dens	C-	Sin.	1	2,86	4		1							
31433	Flooded	W	x=+3, y=-0	61	18	Reddish peat	50-75	Equus caballus	Dens	I2+	Sin.	1	8,57	5		1					Present		
31433	Flooded	W	x=+3, y=-0	61	19	Reddish peat	50-75	Unidentified		Fragment		1	3,07	35		3							
31433	Flooded	W	x=+3, y=-0	61	20	Reddish peat	50-75	Unidentified		Fragment		1	13,27	7		1	Present		Scraping				
31433	Flooded	W	x=+3, y=-0	61	22	Reddish peat	50-75	Unidentified		Fragment		1	10,12	75	Polishing	Not applicable			Scraping				
31433	Flooded	W	x=+3, y=-0	61	23	Reddish peat	50-75	Unidentified		Fragment		1	20,46	16		1			Scraping				
31433	Flooded	W	x=+3, y=-0	61	24	Reddish peat	50-75	Ovis aries/Capra hircus	Os costae	Corpus costae 40%		1	2,05	7		1							
31433	Flooded	W	x=+3, y=-0	61	25	Reddish peat	50-75	Unidentified		Fragment		1	1,49	6		1	Present						
31433	Flooded	W	x=+3, y=-0	61	26	Reddish peat	50-75	Vulpes vulpes	Dens	C+		1	0,7	3		1					Present		
31433	Flooded	W	x=+3, y=-0	61	27	Reddish peat	50-75	Bos taurus	Dens	m1-; crown & neck (complete), roots (complete 30%)	Dex.	2	18,79	55		1							
31433	Flooded	W	x=+3, y=-0	61	28	Reddish peat	50-75	Unidentified		Fragment		1	7,81	85	Rounding and polishing	Not applicable		Gnaw, pitting	Chop				
31433	Flooded	W	x=+3, y=-0	61	29	Reddish peat	50-75	Sus sp.	Ulna	Complete		1	35,51	14	Rounding and polishing	Not applicable	Present		Scraping		Present		
31433	Flooded	W	x=+3, y=-0	61	30	Reddish peat	50-75	Equus caballus	Os costae	Corpus costae 90%	Dex.	1	48,62	275	Polishing	1			Scraping				
31433	Flooded	W	x=+3, y=-0	61	31	Reddish peat	50-75	Equus caballus	Os costae	Corpus costae 90%	Sin.	1	48,53	275	Polishing	1			Scraping			Present	
31433	Flooded	W	x=+4, y=-0	62	1	Reddish mud	25-35	Unidentified		Fragment		1	6,19	6	Polishing	1			Chop	Yes	Present		
31433	Flooded	W	x=+4, y=-0	62	2	Reddish mud	35-45	Equus caballus	Dens	m1+	Dex.	1	19,14	35		3					Present	Present	
31433	Flooded	W	x=+4, y=-0	62	3	Reddish peat	45-55	Unidentified		Fragment		1	39,61	7		3							
31433	Flooded	W	x=+4, y=-0	62	4	Reddish peat	45-55	Unidentified		Fragment		1	21,55	65		3							
31433	Flooded	W	x=+4, y=-0	62	5	Reddish peat	45-55	Unidentified		Fragment		1	6,64	45		3							
31433	Flooded	W	x=+4, y=-0	62	6	Reddish peat	45-55	Unidentified		Fragment		1	2,85	35		3			Chop				
31433	Flooded	W	x=+4, y=-0	62	7	Reddish peat	45-55	Unidentified		Fragment		1	1,27	25		3							
31433	Flooded	W	x=+4, y=-0	62	8	Reddish peat	45-55	Unidentified		Fragment		1	2,8	3		3							
31433	Flooded	W	x=+4, y=-0	62	9	Reddish peat	45-55	Unidentified		Fragment		1	0,72	2		3							
31433	Flooded	W	x=+4, y=-0	62	10	Reddish peat	45-55	Unidentified		Fragment		1	3,26	8		3				Yes		Present	
31433	Flooded	W	x=+4, y=-0	62	11	Reddish peat	45-55	Unidentified		Fragment		1	3,36	9		3	Present			Yes			
31433	Flooded	W	x=+4, y=-0	62	12	Reddish peat	45-55	Unidentified		Fragment		1	0,69	45		3							
31433	Flooded	W	x=+4, y=-0	62	13	Reddish peat	45-55	Unidentified		Fragment		1	1,1	35		1			Cut				
31433	Flooded	W	x=+4, y=-0	62	14	Reddish peat	45-55	Unidentified		Fragment		1	0,26	25		1							
31433	Flooded	W	x=+4, y=-0	62	17	Reddish peat	55-65	Unidentified		Fragment		1	3,57	75		3		Gnaw					
31433	Flooded	W	x=+4, y=-0	62	18	Reddish peat	55-65	Unidentified		Fragment		1	2,35	35	Polishing	3							
31433	Flooded	W	x=+4, y=-0	62	19	Reddish peat	55-65	Bos taurus	Os scapulae	Fragment		1	17,49	95	Rounding and polishing	Not applicable	Present		Scraping				
31433	Flooded	W	x=+4, y=-0	62	20	Reddish peat	55-65	Canis familiaris	Cranium	Os zygomaticum (complete 95%)	Dex.	1	3,24	45		1							
31433	Flooded	W	x=+4, y=-0	62	21	Reddish peat	55-65	Equus caballus	Os tarsi quartum	Complete	Dex.	1	9,46	35		3							
31433	Flooded	W	x=+4, y=-0	62	22	Reddish peat	55-65	Canis familiaris	Vertebrae lumbale	Complete 80%		1	8,26	4	Polishing	1			Cut				
31433	Flooded	W	x=+5, y=-0	63	1	Reddish peat	45-70	Unidentified		Fragment		1	6,7	4		1		Pitting			Present		Belongs to 2
31433	Flooded	W	x=+5, y=-0	63	2	Reddish peat	45-70	Unidentified		Fragment		1	3,71	3		1					Present		Belongs to 1
31433	Flooded	W	x=+5, y=-0	63	3	Reddish peat	45-70	Unidentified		Fragment		1	4,71	4		1					Present		
31433	Flooded	W	x=+5, y=-0	63	5	Reddish peat	45-70	Equus caballus	Tarsale III	Complete	Dex.	1	12,43	4		2							
31433	Flooded	W	x=+5, y=-0	63	6	Reddish peat	45-70	Unidentified		Fragment		1	2,77	5	Polishing	1			Blow, scraping				
31433	Flooded	W	x=+5, y=-0	63	7	Reddish peat	45-70	Ovis aries	Ulna	Complete 80%	Sin.	1	3,36	7		1					Present		
31433	Flooded	W	x=+5, y=-0	63	8	Reddish peat	45-70	Unidentified		Fragment		1	5,96	8		1		Gnaw	Chop, scraping				
31433	Flooded	W	x=+5, y=-0	63	9	Reddish peat	45-70	Unidentified		Fragment		1	9,38	85		1			Scraping		Present		
31433	Flooded	W	x=+5, y=-0	63	10	Reddish peat	45-70	Unidentified		Fragment		1	10,39	17	Polishing	Not applicable			Cut		Present		
31433	Flooded	W	x=+5, y=-0	63	11	Reddish peat	45-70	Unidentified		Fragment		1	6,88	14	Polishing	Not applicable				Yes	Present		
31433	Flooded	W	x=+5, y=-0	63	12	Reddish peat	45-70	Unidentified		Fragment		1	16,41	28	Polishing	Not applicable				Yes	Present		
31433	Flooded	W	x=+5, y=-0	63	13	Reddish peat	45-70	Equus caballus	Os costae	Corpus costae 40%	Sin.	1	20,81	135	Polishing	Not applicable			Scraping		Present		
31433	Flooded	W	x=+6, y=-0	64	1	Reddish mud	25-35	Ovis aries	Humerus	Diafys (complete 20%)	Dex.	1	7,76	45	Rounding and polishing	Not applicable			Blow				
31433	Flooded	W	x=+6, y=-0	64	2	Reddish mud	25-35	Unidentified		Fragment		1	10,05	75	Rounding	3			Chop	Yes	Present		
31433	Flooded	W	x=+6, y=-0	64	3	Reddish mud	35-45	Unidentified		Fragment		1	6,23	4		3							

LUHM	Area	Zone	Coordinates	Square nr.	Find nr.	Layer	Depth (cm)	Species	Element	Part	Side	Quantity	Weight (g)	Measurment (mm)	Abrasion	Weathering (Boethius)	Trampling	Gnaw-marks	Butchery-marks	Marrow split	Root etched	Recent damage	Notes
31433	Flooded	W	x=+6, y=-0	64	4	Reddish mud	35-45	Unidentified		Fragment		1	3,07	35	Rounding and polishing	Not applicable							
31433	Flooded	W	x=+6, y=-0	64	5	Grey mud	45-70	Equus caballus	Metatarsale II	Complete 80%	Dex.	1	9,7	95	Rounding	3							
31433	Flooded	W	x=+6, y=-0	64	6	Grey mud	45-70	Equus caballus	Phalanx I	Complete		1	43,97	8		3	Present		Cut				
31433	Flooded	W	x=+6, y=-0	64	7	Grey mud	45-70	Ovis aries	Atlas	Fragment		1	8,65	55		1			Cut			Present	
31433	Flooded	W	x=+6, y=-0	64	8	Grey mud	45-70	Unidentified		Fragment		1	1,84	4		1							
31433	Flooded	W	x=+6, y=-0	64	9	Grey mud	45-70	Unidentified		Fragment		1	0,65	4	Polishing	1							
31433	Flooded	W	x=+6, y=-0	64	10	Grey mud	45-70	Unidentified		Fragment		1	5,75	5	Rounding and polishing	Not applicable							
31433	Flooded	W	x=+8, y=-0	65	1	Reddish mud	35-45	Unidentified		Fragment		1	6,92	4		1			Chooped off		Present		
31433	Flooded	W	x=+8, y=-0	65	2	Sand (bottom)	75-	Phocidae sp.	Vertebrae lumbale	Complete 40%		1	53,06	55		2			Chop		Present		
31433	Flooded	W	x=+8, y=-0	65	3	Sand (bottom)	75-	Phocidae sp.	Vertebrae lumbale	Complete 50%		1	64,49	75		2			Chop				Pathology
31433	Flooded	W	x=+8, y=-0	65	4	Sand (bottom)	75-	Phocidae sp.	Vertebrae lumbale	Compete 60%		1	63,39	105		2			Chop				
31433	Flooded	W	x=+8, y=-0	65	5	Sand (bottom)	75-	Phocidae sp.	Os vertebrae	Complete 50%		1	50,6	6		2		Pitting	Cut, chop				
31433	Flooded	W	x=+8, y=-0	65	6	Sand (bottom)	75-	Phocidae sp.	Os costae	Corpus costae 90%		1	19,23	165		3	Present		Chop, scraping				
31433	Flooded	W	x=+8, y=-0	65	7	Sand (bottom)	75-	Unidentified		Fragment		1	12,85	75	Rounding	3							
31433	Flooded	W	x=+8, y=-0	65	8	Sand (bottom)	75-	Unidentified		Fragment		1	4,94	35		3							
31433	Flooded	W	x=+8, y=-0	65	9	Sand (bottom)	75-	Unidentified		Fragment		1	5,42	5	Rounding	3					Present		
31433	Flooded	W	x=+8, y=-0	65	10	Sand (bottom)	75-	Unidentified		Fragment		1	1,92	3		1					Present		
31433	Flooded	W	x=+9, y=-0	66	1	Reddish mud	25-35	Ovis aries	Humerus	Diafys		1	17,79	55		3		Chew	Chop				
31433	Flooded	W	x=+9, y=-0	66	2	Reddish mud	25-35	Unidentified		Fragment		1	2,64	55	Polishing	1			Scraping		Present	Present	
31433	Flooded	W	x=+9, y=-0	66	3	Reddish mud	35-45	Bos taurus	Os mandibulae	Fragment		1	24,21	9	Rounding and polishing	Not applicable							
31433	Flooded	W	x=+9, y=-0	66	4 & 6	Grey mud	45-55	Ovis aries	Os mandibulae + dens	Corpus mandibulae (complete 50%); i-, dp3- & dp4-	Dex.	2	12,52	11		2	Present		Scraping				Number 4 an 6 have been glued together, belongs with number 5
31433	Flooded	W	x=+9, y=-0	66	5	Grey mud	45-55	Ovis aries/Capra hircus	Dens	m2-	Dex.	1	3,45	35		2							Belongs to 4 and 6
31433	Flooded	W	x=+9, y=-0	66	7	Grey mud	45-55	Unidentified		Fragment		1	3,05	35		2							
31433	Flooded	W	x=+9, y=-0	66	8	Grey mud	45-55	Canis familiaris	Axsis	Complete		1	15,63	6	Polishing	2			Cut				
31433	Flooded	W	x=+9, y=-0	66	10	Sand (bottom)	65-	Bos taurus	Ulna	Complete 30%	Dex.	1	32,2	11	Rounding and polishing	Not applicable	Present	Gnaw, pitting	Chop, scraping				
31433	Flooded	W	x=+10, y=-0	67	1	Reddish mud	35-45	Equus caballus	Ulna	Complete 70%	Sin.	1	60,1	145		3	Present	Chew	Cut, chop		Present		
31433	Flooded	W	x=+10, y=-0	67	2	Sand (bottom)	55-	Ovis aries	Dens	m2-		1	3,51	3		3							
31433	Flooded	W	x=+14, y=-0	68	1	Reddish mud	35-45	Bos taurus	Os sacrum	Fragment		1	26,57	75	Rounding	3	Present		Cut				
31433	Flooded	W	x=+14, y=-0	68	2	Reddish mud	45-55	Unidentified		Fragment		1	69,26	16	Rounding and polishing	Not applicable		Gnaw	Cut, blow	Yes			
31433	Flooded	W	x=+14, y=-0	68	3	Reddish peat	55-75	Unidentified		Fragment		1	3,55	35		3							
31433	Flooded	W	x=+14, y=-0	68	4	Sand (bottom)	85-	Equus caballus	Metacarpus	Diafys (compelte 20%)		1	22,63	8		1			Chop	Yes			
31433	Outside	W	x=+16, y=-0	69	1	Sand (bottom)	40-	Unidentified		Fragment		1	30,5	13	Rounding	1	Present	Gnaw	Scraping				
31433	Outside	W	x=+18, y=-0	70	1	Humus	25-35	Bos taurus	Metacarpus	Fragment		1	51,44	14	Polishing	Not applicable		Chew	Cut, scraping	Yes			
31433	Outside	W	x=+18, y=-0	70	2	Sand (bottom)	35-	Unidentified		Fragment		1	0,83	3		3							
31433	Outside	W	x=+18, y=-0	70	3	Sand (bottom)	35-	Unidentified		Fragment		1	2,54	35		3							
31433	Outside	W	x=+19, y=-0	71	1	Humus	25-35	Unidentified		Fragment		1	7,31	55	Rounding and polishing	Not applicable			Cut	Yes			
31433	Flooded	B	x=+7, y=-3	326	1	Clayey sand (bottom)	55-	Unidentified		Fragment		1	41,29	125	Rounding	1	Present		Scraping, blow	Yes	Present		
31433	Flooded	B	x=+7, y=-3	326	2	Clayey sand (bottom)	55-	Equus caballus	Calcaneus	Complete 80%	Dex.	1	58,16	9	Rounding and polishing	Not applicable			Cut		Present		Partially whitegrey colouration on the surface
31433	Flooded	B	x=+7, y=-3	326	3	Clayey sand (bottom)	55-	Unidentified		Fragment		1	2,3	45		3							
31433	Flooded	B	x=+7, y=-3	326	4	Clayey sand (bottom)	55-	Canis familiaris	Cranium	Os zygomaticum (complete)	Dex.	1	3,39	55	Rounding and polishing	Not applicable					Present		
31433	Flooded	B	x=+7, y=-3	326	5	Clayey sand (bottom)	55-	Unidentified		Fragment		1	3,62	9		3				Yes			
31433	Flooded	B	x=+7, y=-4	327	1	Clayey sand (bottom)	55-	Unidentified		Fragment		1	2,71	3	Rounding and polishing	Not applicable		Pitting					
31433	Flooded	B	x=+7, y=-4	327	2	Clayey sand (bottom)	55-	Unidentified		Fragment		1	3,54	4	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-4	327	3	Clayey sand (bottom)	55-	Unidentified		Fragment		1	7,34	5	Rounding	3		Pitting					
31433	Flooded	B	x=+7, y=-4	327	4	Clayey sand (bottom)	55-	Unidentified		Fragment		1	2,27	35	Rounding and polishing	Not applicable					Present		
31433	Flooded	B	x=+7, y=-4	327	5	Clayey sand (bottom)	55-	Unidentified		Fragment		1	7,79	35	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-4	327	6	Clayey sand (bottom)	55-	Bos taurus	Metacarpus	Fragment	Sin.	1	19,83	5	Rounding	Not applicable			Chop	Yes			Whitegrey colouration on the surface
31433	Flooded	B	x=+7, y=-4	327	7	Clayey sand (bottom)	55-	Equus caballus	Metatarsal III	Fragment		1	43,77	10	Rounding and polishing	Not applicable			Cut, scraping	Yes	Present		
31433	Flooded	B	x=+7, y=-5	328	1	Clayey sand (bottom)	55-	Unidentified		Fragment		1	20,92	95	Rounding	Not applicable	Present	Scraping			Present		
31433	Flooded	B	x=+7, y=-6	329	1	Clayey sand (bottom)	50-	Unidentified		Fragment		1	3,25	35	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-6	329	2	Clayey sand (bottom)	50-	Unidentified		Fragment		1	3,92	6		1		Scraping	Scraping	Yes			
31433	Flooded	B	x=+7, y=-7	330	1	Clayey sand (bottom)	55-	Unidentified		Fragment		1	4,24	3	Rounding	1							
31433	Flooded	B	x=+7, y=-7	330	2	Clayey sand (bottom)	55-	Canis familiaris	Os maxillare	Maxilla (complete 90%); p2+, p4+, m1+ & m2+	Sin.	1	24,14	8	Rounding	Not applicable					Present		
31433	Flooded	B	x=+7, y=-7	330	3	Clayey sand (bottom)	55-	Ovis aries/Capra hircus	Vertebrae thoracicae	Fragmented		1	7,62	6		1						Present	
31433	Flooded	B	x=+7, y=-7	330	4	Clayey sand (bottom)	55-	Canis familiaris	Os maxillare	Complete 15%	Dex.	1	3,22	5	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-7	330	5	Clayey sand (bottom)	55-	Unidentified		Fragment		1	1,62	4	Rounding	3						Present	
31433	Flooded	B	x=+7, y=-7	330	6	Clayey sand (bottom)	55-	Unidentified		Fragment		1	1,16	2		2							
31433	Flooded	B	x=+7, y=-7	330	7	Clayey sand (bottom)	55-	Canis familiaris	Os maxillare	Maxilla (complete 40%); p4+, m1+, m2+	Dex.	1	20,47	6	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-7	330	8	Clayey sand (bottom)	55-	Ovis aries	Dens	m2-; crown & neck (complete)		1	3,5	25	Polishing	3							
31433	Flooded	B	x=+7, y=-7	330	9	Clayey sand (bottom)	55-	Canis familiaris	Os mandibulae	Mandibula (complete 70%); p4-, m1- & m2-	Dex.	1	34,34	105	Rounding	Not applicable	Present		Scraping		Present		
31433	Flooded	B	x=+7, y=-7	330	10	Clayey sand (bottom)	55-	Canis familiaris	Dens	C+	Dex.	1	2,21	4		1							
31433	Flooded	B	x=+7, y=-7	330	11	Clayey sand (bottom)	55-	Canis familiaris	Os mandibulae	Mandibula (complete); C-, p2- & m1-	Dex.	1	66,25	155	Rounding	Not applicable	Present		Scraping		Present		
31433	Flooded	B	x=+7, y=-7	330	12	Clayey sand (bottom)	55-	Canis familiaris	Os mandibulae	Mandibula complete; C-, p3-, m1- & m2-	Sin.	1	71,46	155	Rounding	Not applicable	Present		Cut, scraping		Present		
31433	Flooded	B	x=+7, y=-7	330	13	Clayey sand (bottom)	55-	Phocidae sp.	Tibia	Diaphysis 70%	Dex.	1	135,4	23	Rounding	Not applicable	Present		Scraping		Present	Present	Whitegrey colouration on the surface
31433	Flooded	B	x=+7, y=-8	331	5	Clayey sand (bottom)	55-	Aves	Humerus	Complete 50% (prox.)	Sin.	1	2,4	6		1							
31433	Flooded	B	x=+7, y=-8	331	6	Clayey sand (bottom)	55-	Unidentified		Fragment		1	15,06	95	Rounding and polishing	Not applicable							
31433	Flooded	B	x=+7, y=-8	331	7	Clayey sand (bottom)	55-	Canis familiaris	Radius	Complete 50%	Dex.	1	12,76	125		1			Scraping		Present		
31433	Flooded	B	x=+7, y=-8	331	8	Clayey sand (bottom)	55-	Canis familiaris	Cranium	Os occipitale (complete 90%)		1	12,94	45		1							
31433	Flooded	B	x=+7, y=-9	332	1	Clayey sand (bottom)	55-	Unidentified		Fragment		1	0,56	2		2							
31433	Flooded	B	x=+7, y=-9	332	2	Clayey sand (bottom)	55-	Aves	Femur	Complete 50% (prox.)	Sin.	1	0,59	25		1							
31433	Flooded	B	x=+7, y=-9	332	3	Clayey sand (bottom)	55-	Unidentified		Fragment		1	2,95	5	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-9	332	4	Clayey sand (bottom)	55-	Unidentified		Fragment		1	2,58	35		1							
31433	Flooded	B	x=+7, y=-9	332	5	Clayey sand (bottom)	55-	Canis familiaris	Os mandibulae	Proc. articularis	Dex.	1	5,88	4	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-9	332	6	Clayey sand (bottom)	55-	Unidentified		Fragment		1	1,4	25	Rounding	Not applicable							
31433	Flooded	B	x=+7, y=-9	332	7	Clayey sand (bottom)	55-	Canis familiaris	Ulna	Complete 80%	Dex.	1	13,74	115	Rounding	Not applicable	Present	Gnaw, pitting	Scraping		Present		
31433	Hollow	M	x=-8, y=-8	238	1	Reddish mud	40-60	Ovis aries	Metatarsus	Complete	Sin.	1	7,94	11		1							Somewhat whitegrey tint distal
31433	Hollow	M	x=-8, y=-8	238	2	Reddish mud	40-60	Canis familiaris	Os mandibulae	Complete 40%	Dex.	1	16,14	75	Rounding and polishing	Not applicable							
31433	Hollow	M	x=-8, y=-8	238	3	Reddish mud	40-60	Canis familiaris	Metatarsale V	Complete	Dex.	1	1,74	6		1							Somewhat whitegrey tint proximal
31433	Hollow	M	x=-8, y=-8	238	4 & 6	Grey mud	60-160	Equus caballus	Vertebrae cervicale	Complete 65%		2	61,88	8	Polishing	Not applicable					Present		Number 4 and 6 have been glued together, with salt chrystals
31433	Hollow	M	x=-8, y=-8	238	5	Grey mud	60-160	Ovis aries	Metacarpus	Complete	Sin.	1	11,53	10		3							
31433	Hollow	M	x=-8, y=-8	238	7	Grey mud	60-160	Ovis aries	Metacarpus	Complete	Sin.	1	15,04	105	Polishing	Not applicable							
31433	Hollow	M	x=-8, y=-8	238	8	Grey mud	60-160	Ovis aries	Metatarsus	Complete	Dex.	1	16,53	115	Polishing	Not applicable							Greyish white distal
31433	Hollow	M	x=-8, y=-8	238	9	Grey mud	60-160	Canis familiaris	Cranium + dens	Ossa maxillaris, ossa nasalis & ossa zygomaticum (complete), os temporale dex. (complete); p4+, m1+ & m+2	Sin. & dex.	1	115,34	175	Polishing	Not applicable							Greyish white distal
31433	Hollow	M	x=-8, y=-8	238	10	Sand (bottom)	160-	Canis familiaris	Vertebrae thoracicae	Complete		1	6,8	75	Polishing	Not applicable							Crystallised salt in foramen magnum
31433	Hollow	M	x=-8, y=-8	238	11	Sand (bottom)	160-	Canis familiaris	Vertebrae lumbale	Complete		1	7,67	35	Polishing	Not applicable							Crystallised salt at proc. spinosus
31433	Hollow	M	x=-8, y=-8	238	12	Sand (bottom)	160-	Bos taurus	Tibia	Complete	Dex.	1	284,2	305	Rounding and polishing	Not applicable		Scraping					Somewhat whiteish tint
31433	Flooded	M	x=-8, y=-9	239	2	Reddish mud	50-60	Ovis aries	Metatarsus	Complete	Sin.	1	19,78	14		1		Scraping		Yes	Present		
31433	Flooded	M	x=-8, y=-9	239	3	Sandy lime mud (bottom)	90-	Bos taurus	Mandibula	Fragment	Dex.	1	41,88	10	Rounding and polishing	Not applicable	Present		Scraping, chopped off				
31433	Flooded	M	x=-8, y=-9	239	4	Sandy lime mud (bottom)	90-	Ovis aries	Dens	M2+ (crown & neck)	Dex.	1	2,33	25	Polishing	Not applicable							
31433	Flooded	M	x=-8, y=-9	239	5	Sandy lime mud (bottom)	90-	Unidentified		Fragment		1	0,84	35	Polishing	Not applicable							
31433	Flooded	M	x=-8, y=-9	239	6	Sandy lime mud (bottom)	90-	Canis familiaris	Os costae	Complete		1	2,34	95	Polishing	Not applicable							
31433	Flooded	M	x=-8, y=-9	239	8	Sandy lime mud (bottom)	90-	Aves	Os coracoideum	Complete	Sin.	1	1,05	5	Polishing	Not applicable							
31433	Flooded	M	x=-8, y=-9	239	9	Sandy lime mud (bottom)	90-	Canis familiaris	Vertebrae lumbale	Complete 60%		1	2,51	8	Polishing	Not applicable							
31433	Flooded	M	x=-8, y=-10	240	1	Reddish mud	40-60	Unidentified		Fragment		1	11,25	5	Polishing	Not applicable							
31433	Flooded	M	x=-8, y=-10	240	2	Reddish mud	40-60	Canis familiaris	Os scapulae	Complete 40%	Dex.	1	14,36	85		1							
31433	Flooded	M	x=-8, y=-10	240	3	Reddish mud	40-60	Bos taurus	Tibia	Distal 20%	Sin.	1	73,28	105		1			Chop	Yes	Present		
31433	Flooded	M	x=-8, y=-10	240	4	Reddish mud	40-60	Equus caballus	Atlas	Complete 60%		1	68,34	115		1							
31433	Hollow	M	x=-9, y=-8	246	1	Grey mud	60-100	Bos taurus	Os mandibulae + dens	Mandibulae (complete); p2-, p3-, p4-, m1-, m2- & m3-	Dex.	1	162,75	195	Polishing	Not applicable			Scraping				
31433	Hollow	M	x=-9, y=-8	246	2	Grey mud	60-100	Ovis aries	Cranium	Ossa frontalis & ossa parietalis (complete), os occipitale (compelte 50%)	Sin. & dex.	1	208,13	185		3							
31433	Hollow	M	x=-9, y=-8	246	3	Clayey sand (bottom)	100-	Canis familiaris	Femur	Complete	Dex.	1	33,82	17	Polishing	3							
31433	Hollow	M	x=-9, y=-8	246	4	Clayey sand (bottom)	100-	Ovis aries	Metatarsus	Complete	Dex.	1	15,94	11		3							
31433	Hollow	M	x=-9, y=-8	246	5	Clayey sand (bottom)	100-	Ovis aries	Os maxillare + dens	dp2+, dp3+, dp4+ & m1+	Dex.	1	18,11	9	Polishing	Not applicable							
31433	Flooded	M	x=-9, y=-9	247	1	Reddish mud	30-50	Bos taurus	Os costae	Fragment		1	15,54	115		1					Present	Present	
31433	Flooded	M	x=-9, y=-10	248	1	Reddish mud	35-55	Unidentified		Fragment		1	2,32	35	Polishing	Not applicable							
31433	Flooded	M	x=-9, y=-10	248	2	Reddish mud	35-55	Unidentified		Fragment		1	1,41	35	Polishing	Not applicable							
31433	Flooded	M	x=-9, y=-10	248	3	Reddish mud	35-55	Unidentified		Fragment		1	1,32	65		2							
31433	Flooded	M	x=-9, y=-10	248	4	Reddish mud	35-55	Bos taurus	Os mandibulae	Fragment	Sin.	1	9,72	55		1							
31433	Flooded	M	x=-9, y=-10	248	5	Reddish mud	35-55	Unidentified		Fragment		1	6,93	8		1							
31433	Flooded	M	x=-9, y=-10	248	6	Reddish mud	35-55	Unidentified		Fragment		1	11,24	5	Rounding and polishing	Not applicable		Gnaw	Cut	Yes			
31433	Flooded	M	x=-9, y=-10	248	7	Reddish mud	35-55	Unidentified		Fragment		1	18,39	6		3							
31433	Flooded	M	x=-10, y=-9	254	1	Reddish mud	20-50	Unidentified		Fragment		1	61,71	105	Rounding and polishing	Not applicable							
31433	Flooded	M	x=-10, y=-9	254	2	Sand (bottom)	50-	Unidentified		Fragment		1	13,64	7	Rounding and polishing	Not applicable							
31433	Flooded	M	x=-10, y=-9	254	3	Sand (bottom)	50-	Unidentified		Fragment		1	86,08	125	Rounding and polishing	Not applicable		Scraping		Yes			
31433	Flooded	M	x=-10, y=-10	255	1	Sand (bottom)	50-	Bos taurus	Dens	m3+	Sin.	1	41,54	5	Polishing	Not applicable							
31433	Flooded	M	x=-11, y=-8	261	1	Reddish mud	20-50	Unidentified		Fragment		1	1,18	35		1							
31433	Flooded	M	x=-11, y=-8	261	2	Reddish mud	20-50	Unidentified		Fragment		1	7,56	4	Polishing	3							
31433	Flooded	M	x=-11, y=-8	261	3	Sandy lime mud (bottom)	50-	Equus caballus	Tibia	Diaphysis 90%	Sin.	1	324,08	205		2							
31433	Flooded	M	x=-11, y=-8	261	4	Sandy lime mud (bottom)	50-	Unidentified		Fragment		1	2,26	3	Rounding	Not applicable			Scraping				
31433	Flooded	M	x=-11, y=-8	261	5	Sandy lime mud (bottom)	50-	Unidentified		Fragment		1	1,11	4		1							
31433	Flooded	M	x=-11, y=-9	262	1	Reddish mud	20-50	Equus caballus	Femur	Diaphysis 80%	Sin.	1	2,57	22		3	Present		Scraping		Present		