11 Heimdalsjordet

Trade, production and communication

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Introduction

Only 500 m south of the famous Gokstad mound outside the town of Sandefjord in Vestfold, in a field called *Heimdalsjordet*, a new trade and production site from the Viking Age was partly excavated in 2012 and 2013. It is situated in a valley at what was in the Viking Age a well-hidden natural harbour, located by a small strait that connected the inner reaches of the two fjords Mefjorden and Sandefjord behind the island of Vesterøya (Figures 11.1, 11.2). This newly discovered site is bound to have a substantial impact on our understanding of Viking-Age trade in south-eastern Norway and beyond, in particular because it demonstrates that the renowned international marketplace at Kaupang in Larvik municipality, only 15 km to the south of Gokstad, was not as dominating as previously thought (Skre 2007, 2008a, 2011). The goal of this chapter is to provide a first preliminary report and discussion of the site for an international readership (see Bill and Rødsrud 2013 for a presentation in Norwegian). It will include presentations of structures and find groups, as well as deliberations about the dating and function of the site, as far as is possible at a time when many analyses remain to be done.

The excavations at Heimdalsjordet were conducted within the framework of the research project 'Gokstad Revitalised' (GOREV), which is a collaboration between the Museum of Cultural History in Oslo, the Section of Cultural Heritage Management at Vestfold County Council and Vestfold Museums (an inter-communal company). The project aims to contextualise the extraordinary but under-researched Gokstad ship burial, dated to the years around AD 900, through a varied series of investigations (Bill 2013). One important focus area is the economy and structure of the settlement landscape in which the monumental burial mound was placed, and how this landscape developed in the decades and centuries before and after the construction of the mound. The excavations at Heimdalsjordet are a key component in this study, since they have documented the presence of significant economic activities both before and after the construction of the Gokstad mound. The site has yielded material remains of trade in the shape of hacksilver and large amounts of cut-up coins, in combination with exotic items such as imported weights and beads. Abundant production waste and fragments from fine metalworking as well as

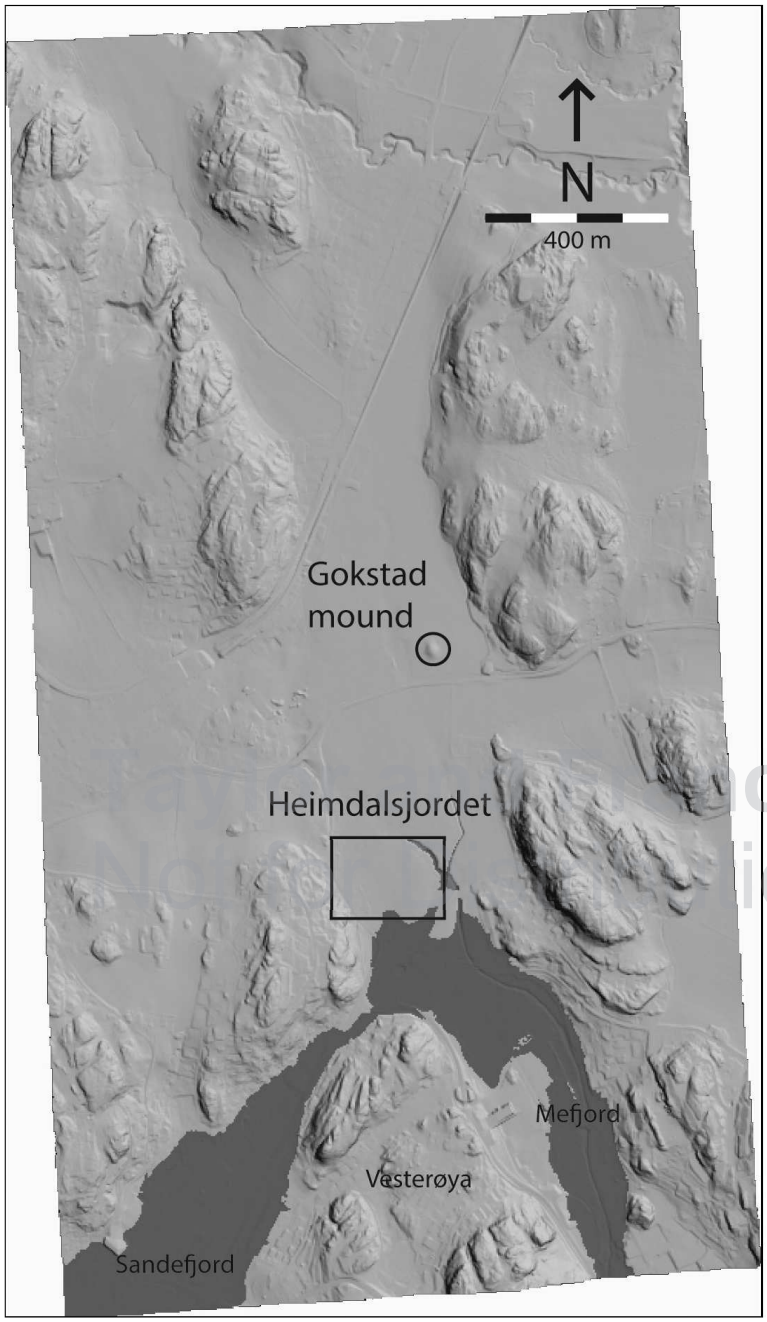

Figure 11.1 LIDAR image of the area surrounding the Gokstad mound and Heimdalsjordet. The approximate sea level at around AD 900 is indicated in dark grey.

slag from ironworking and waste from whetstone-making and amber-working indicate significant craft production on the site, probably intended for trade.

Heimdalsjordet was not, archaeologically speaking, virgin ground before excavation started in 2012. The area had attracted archaeological attention on several earlier occasions. In 1943 the archaeologist Erik Hinsch (1945) and his

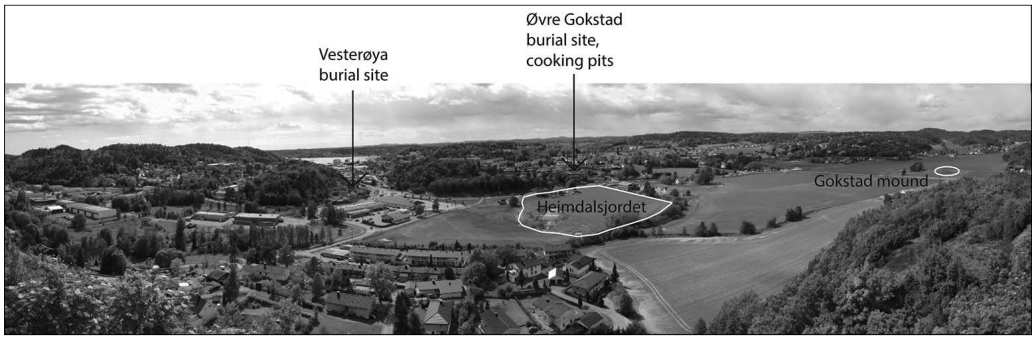

Figure 11.2 Panoramic view of the Gokstad-Heimdalsjordet site.

team excavated a rather big but plundered boat grave that could be dated no more precisely than to the Viking Age. In the 1980s several other mounds were detected in aerial survey from the differential growth of vegetation. In connection with plans for road construction in 1995, the site was again surveyed with four test trenches and metal detector surveys. During this campaign a considerable number of archaeological features and finds from handicraft activities were discovered (Gansum and Garpestad 1995).

The structures

The area of Heimdalsjordet was therefore given high priority when the geophysical campaigns of the GOREV project were carried out in 2011 and 2012. More than 60 ha in the surroundings of the Gokstad mound were surveyed using magnetometry and high-resolution georadar (Bill et al. 2013). The surveys were conducted by the LBI (Ludwig Boltzman Institute for Archaeological Prospection and Virtual Archaeology at the University of Vienna) and NIKU (Norwegian Institute for Cultural Heritage Research), and resulted in the finding of several new burial mounds and possible house constructions, as well as providing a good understanding of the palaeolandscape. By far the most promising results, however, came from a 26,000 m^2 plot of arable land on Heimdalsjordet (Figure 11.3).

Here the surveys resulted in the discovery of a substantial system of ditches enclosing rounded rectangular plots that were located on either side of an apparent road or walkway oriented east–west. The western end of the 2-m-wide roadway, now disappearing under a modern house and garden, seemingly connected the investigated area with the higher ground on the western side of the valley. The eastern end of the road is not precisely defined, but it seems to terminate on a slightly raised sand and gravel spit in the centre of the valley, just next to the mouth of a small creek that enters the natural harbour. On the northern, landward site of the street the plots were mostly placed orthogonally to it, sometimes with several plots, one behind the other, while on the southern, seaward side they were in some cases arranged parallel

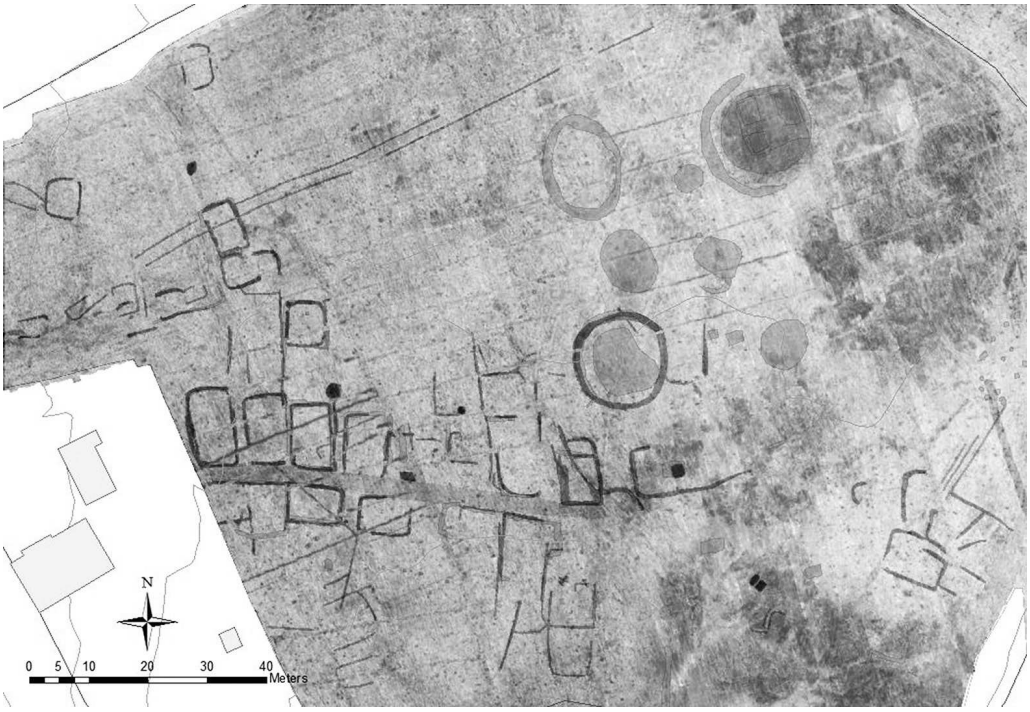

Figure 11.3 Graphic presentation of the GPR data from Heimdalsjordet, with preliminary interpretations.

to it. Along the long sides, each plot had its own ditch, which was not shared with the neighbouring plot. To the east, excavation has demonstrated that there are similar ditches also in areas in which the geophysical survey revealed no such structures, but it is still possible that part of the raised area on the sand spit was not divided up by ditches.

The excavations in 2012 and 2013 showed that there were significant differences in the ditches found in the western, more clayey parts of the site, and those found further to the east, on the higher, better-drained ground. To the west the ditches had been dug deep – sometimes up to 80 cm – and often had remains of wood near the bottom. They were also interconnected across the street, and it can be suggested that they functioned as drainage ditches, conducting water away from the plots of land in between. This interpretation is supported by the observation that to the east, where the soil is naturally well drained, the ditches were in general shallower and narrower. Here it could also be clearly observed that the ditch system consisted of several phases, something which was not obvious further west.

The pattern can be interpreted as reflecting a division of the site into workshop plots, the parcel boundaries being located between the drainage ditches of neighbouring plots. This seems to be a variation of the system found on other Viking-Age trading posts in Northern Europe (Jankuhn 1986; Ambrosiani and Erikson 1991; Clarke and Ambrosiani 1991; Feveile 2006; Skre 2007; Kalmring 2011).

Rather than using ditches as boundaries, as for instance at Ribe (Feveile and Jensen 2000; Feveile 2006, 2010) or Sigtuna (Roslund 2007; Ros 2009), some other type of border marker must have been in place, and the drainage ditches were strictly related to the activities on the individual plots. It has to be noted that very few traces of structures have been discovered on or between the parcels, probably since the site has been seriously disturbed by modern agriculture. With the exception of a few patches in the east, all the excavated areas have revealed modern plough-marks in the surface of the sterile subsoil. This does not preclude the existence of hearths or buildings on the parcels, or fences between them. The finds of wood chips in the bottoms of the ditches shows that wooden constructions were erected on the plots at the same time as the ditches were dug, but it is not possible to estimate the extent or character of this activity. More substantial, post-based structures must have been rare or non-existent, but it is possible to understand the drainage ditches as necessary to create dry ground for the building of corner-timbered structures, as well as for tents.

North-east of the parcelled area, the vestiges of several burial mounds have been identified in the geophysical prospection, most of them identical to those known from Hinsch's 1943 excavation and the later aerial photos. However, the initial interpretation of the geophysical data did not reveal all the burials in this area. In 2012 a find of a sword hilt during a metal detector survey led to the excavation of a previously unknown boat grave on the eastern outskirts of the burial site; a ditch surrounding the grave demonstrated that in this case, too, there had originally been a mound. The only datable artefact was a sword of Petersen's (1919) type H, a type that was in use during the period AD 800–950, albeit only rarely towards the end of the period (Hjardar and Vike 2011: 167–9; Androshchuk 2014). The find demonstrates that there may well exist more graves in the area than those observed until now. It also suggests the possibility that the burial ground on Heimdalsjordet was predominantly for boat graves, a hypothesis supported by the observation of a boat-shaped discolouration of the subsoil in one of the 1995 trenches (Gansum and Garpestad 1995).

Several other burial grounds are known from the area surrounding Heimdalsjordet, including one located on the southern tip of Vesterøya (Figure 11.2). This resembles the situation at Kaupang, where separate, specialised cemeteries were placed at the outskirts of the settlement area, including one on the island of Lamøya (Stylegar 2007). The numbers of graves on the various burial sites at Kaupang are, however, much larger than at Heimdalsjordet.

The artefactual material

About 2,000 artefacts were found during the excavation of approximately 1,300 m^2, by the use of metal detectors on the entire site and by systematic sieving of topsoil samples from most of the parcelled area but not the burial ground. The artefacts are fairly typical of what can be expected at a market and production site, and will be discussed below. It should be noted, however, that

the find material is biased. Due to extensive use of metal detectors, in contrast to a rather limited degree of excavation (c. 5 per cent of the site), sieving (less than 1 per cent of the site) and field survey (not completed), fine metal finds are strongly over-represented compared to finds of organic materials, ceramics, glass and stone. Also, iron objects will tend to be under-represented, since the metal detectors were generally set to discriminate against iron because of the large amounts of modern metal waste in the topsoil.

Imports, trade and artisan crafts: coins, weights, fine metals, beads, amber and ceramics

A total of 174 coin fragments have been unearthed at Heimdal, only three of which are almost complete. The majority of the remaining coins are highly fragmented, with weights ranging from 0.03 g to 2.66 g. Most fragments represent 1/8 of the coin or less, and the fragmentation appears to be intentional. The coins are evenly distributed within the allotment area and spread further out in the eastern part (Figure 11.3). Only some 40 coins have so far been identified and dated more precisely, and these results are preliminary. Still, it is clear that dirhams dominate overwhelmingly. The identified coins show that the minting dates are predominantly from the eighth and ninth centuries, up to the mid-800s. The oldest identified coin is an Umayyad dirham minted in AD 710/11 under Caliph Walid Al-N (668–715) in Wasit (Iraq), while the youngest dirhams so far appear to be from around AD 910. The coins came from areas in today's Afghanistan, Armenia, Uzbekistan, Iran, Iraq and possibly Syria. Apparently, only three of the coins in the whole assemblage have been minted in Western Europe. One has been identified, with some uncertainty, as a denier of Louis the Pious, minted during the period AD 820–40, while the other two are currently undetermined.

Hacksilver and ingots of various materials follow more or less the same pattern as the coins. There are examples of fragments of various types of jewellery as well as bullion. Both coins and hacksilver can be cut up as payment in commercial transactions, but we assume that some of the silver may have been cut up to be melted down and converted into local products by craftsmen on the site. This is indicated by abundant finds of crucibles and other production waste from fine metalworking of lead, copper alloys, silver and gold.

Several pieces of metalwork also have a foreign origin, and it is evident that the Heimdalsjordet site received materials from both the British Isles and the Frankish/Carolingian areas in addition to the Caliphate. At least two mounts of copper alloy have insular motifs, while two strap ends and two strap slides are Carolingian types. The latter four all have parallels in the Kaupang material, and are dated by Egon Wamers (2011: 71–4, 91, Tab. 4.1, Fig. 4.23) to the period AD 820–80. Also of Continental origin are a linen-smoother of black-blue glass and three sherds of Badorf pottery. Other pottery sherds might be of Jutlandic origin; they are thought to be imported, because previous research indicates that pottery was not being produced in Norwegian areas during the

Viking Age (Hougen 1993). However, the pottery needs to be studied more carefully before conclusions are drawn.

A total of 147 weights have been found, representing a variety of shapes and materials. Seventy-six are made of lead and come in cylindrical, segmental, conical, biconical and square, flat forms. In addition, there are 44 copper alloy cubo-octahedral weights (shaped like dice with truncated corners, having 14 sides) and 27 oblate-spheroid weights that consist of an iron core with a thin coat of copper alloy (spherical with a flat top and bottom). The latter are assumed to originate in the Islamic world, but were subsequently produced in Scandinavia (Kruse 1992: 80–1; Sperber 1996; Steuer 1997: 460; Gustin 2004: 251). Also interesting is the decoration of three of the spheroid weights with so-called pseudo-Arabic inscriptions, i.e. imitations of Arabic script. These weights indicate a fascination for the East and perhaps a connection to the weighing of Arabic coins, as Unn Pedersen (2008: 170) has proposed. Christoph Kilger (2008: 309) suggests that these inscriptions imitate or relate to the Arabic word *bakh* – good quality – found on some dirhams and thereby playing on the authenticity of the Arab silver. These inscribed weights could thus be associated with notions of quality and reliability in the weighing of metal. Weighing equipment has often been considered a definite indicator of trading activities, but research has shown that it was a practical tool that could also be used in connection with other types of transactions, like measuring out fines or gift exchange. It could, furthermore, be a useful tool in metal casting, in composing alloys and in the production of standardised units of weight (Pedersen 2001; Gustin 2004; Pedersen 2008: 167–8, 178).

The corpus of beads is much smaller than at Kaupang, but the little collection of 59 beads from Heimdalsjordet nevertheless illustrates far-reaching contacts. Segmented beads and tubular glass beads originate in the Byzantine areas; eye beads ~~are~~ from the Mediterranean; and two black beads are probably made of jet or jet-like materials from the British Isles. There are also a few examples of Western European and Scandinavian products, but no signs of large-scale glass bead production on the site. However, a few of the glass beads of Scandinavian origin may have been produced on the site. Some of the undecorated white beads are of low quality. On these pieces the glass that has been wound around a steel wire or mandrel has not completely fused into one solid piece; fragments of glass thread can be torn apart in layers. These beads were found in a plot division ditch and might have been thrown away as waste material. A selection of the beads points towards connections to the Far East and the Caliphate. Beads of cornelian were imported to Scandinavia from areas in the Caucasus, Iran and India (Resi 2011a: 145). Rock crystal occurs naturally over a wider area, including Scandinavia.

Although some beads are believed to be locally produced, most rock crystal beads have been shaped into the same forms as the cornelian beads and should thus be regarded as imports from more or less the same areas (Resi 2011a: 52–3, 143–5). The most interesting aspect of the occurrence of these beads is, however, that they constitute such a high proportion of the collection.

At Kaupang, it is estimated that beads of materials other than glass or amber make up less than 2 per cent of the total collection of beads at the site (Wiker 2007: 137). At Heimdalsjordet, however, 14 beads, or 24 per cent, are of cornelian and rock crystal. The high proportion of exotic beads can be explained in terms of chronological differences. The beads of cornelian and rock crystal become more common in the period AD 860–950 and even later (Callmer 1977: 77, 91). This may point to the production and trade at Heimdalsjordet having its peak somewhat later than Kaupang, or simply that most of the bead trade there took place when the exotic beads were widely available. It may also indicate that the beads were not necessarily meant for necklaces but may be understood as liquid assets with fixed value for transactions, in conjunction with the Arab coin fragments and hacksilver (Kleingärtner and Williams 2014: 53–4).

In addition to the imported products, there is ~~also~~ massive evidence that imported raw materials like lead, copper alloys and amber were worked on the site. These include raw material waste as well as numerous remains of crucibles, which indicate another possible import to the site, namely kaolin clay used for crucibles. This clay has special refractory properties, allowing the crucibles to withstand the heat from repeated forging (Pedersen 2010). Kaolin is not found in the Oslofjord area and is rare in Norway. However, it can be found at several places on the Continent, in the British Isles, in Scania and elsewhere in the world. Kaolin clay is comparatively similar in most places, so the exact origin was not traceable for the Kaupang material (Pedersen 2010).

Probably also related to fine metalworking are large amounts of intensely heated animal bone fragments, found in the sieved samples over most of the sampled area but particularly along the east–west-oriented street. The bone material may have been used as fuel but may also represent the production of bone ash to be used as a reactant in fine-metal processing, where it can fulfil a number of functions (see, e.g. Karageorghis and Kassianidou 1999: 180–3).

Local production: iron, whetstones, textiles and food

Traces of production based on local resources are not dominant on the site, but they are present. Most important are perhaps the concentrations of slag and sintered clay in the north-western part of the site, which seem to indicate iron-working. These traces of production go together with finds of a few important iron objects, including a crescent-shaped piece of iron or bloom from the topsoil. Such pieces of raw material are usually found only in conjunction with central iron production areas but might in this case be associated with further processing or trade. Irmelin Martens (Martens and Rosenqvist 1988) has previously listed 18 pieces from the neighbouring Telemark County, and if it can be demonstrated that this specimen belongs to the Viking Age, it will be interesting to attempt to determine its provenance (Larsen et al. 2011).

When it comes to slate and whetstone/hone production, there are examples of light-grey slate from southern Norway (probably Eidsborg stone from

Telemark) as well as a dark type that has been determined at Kaupang as muscovite-quartz schist originating in western Norway (Resi 2011b). Whole whetstones, large blanks and small fragments suggest that whetstones were manufactured on the site.

Wool and perhaps also vegetable fibres are another group of raw materials worked at Heimdalsjordet. This is demonstrated by 19 spindle whorls and a significant number of loom weight fragments made of burnt clay. There are as many as 18 spindle whorls made of lead and one made of steatite. Some fragments of burnt clay may be parts of spindle whorls, but they are too fragmented for secure identification. Compared with the nearby Kaupang material, the lead spindle whorls may be over-represented due to the focus on metal detecting rather than fieldwalking as the surveying method. At Kaupang, 34 per cent of the spindle whorls were made of burnt clay, 34 per cent of stone, 30 per cent of lead and 2 per cent of bone (Øye 2011: 343). The linen-smoother mentioned above also belongs to the textile-working equipment from the site.

Finally, foodstuffs form an important part of the material excavated on Heimdalsjordet. Small amounts of unburned or only lightly burned bones and teeth were found through sieving across the site. More important, however, is the discovery of large amounts of food waste in parcel ditches in the eastern, higher-lying part of the site. These mainly consisted of charred grain – as much as a small fistful from every 10 litres of soil – but also included significant numbers of fish bones. In the eastern part of the parcelled area elevated phosphate values were observed, possibly also indicating the processing or consumption of foodstuffs in the area. It should also be mentioned that a few trades that could have been expected to be present at Heimdalsjordet are suspiciously absent, since both preservation conditions and excavation methodology should have ensured the recovery of their waste products, had they been present. These include the working of soapstone, as well as of bone and antler, activities that seemingly were not carried out at all, or only to a very small extent, at Heimdalsjordet.

Dating of the site

The chronology of the site is not yet settled, but a preliminary overview of the dating evidence is presented in Figure 11.4. It clearly demonstrates that the site was in use throughout the ninth and tenth centuries AD, but there are indications of use during a longer time span and of changes in use over time. More detailed examination of the various datable find groups can elucidate this further, not the least through comparison with the material from the nearby Kaupang site.

Weights

The lead weights, which are the most common on Heimdalsjordet, have a relatively wide dating frame. Such weights are found in Norway already in

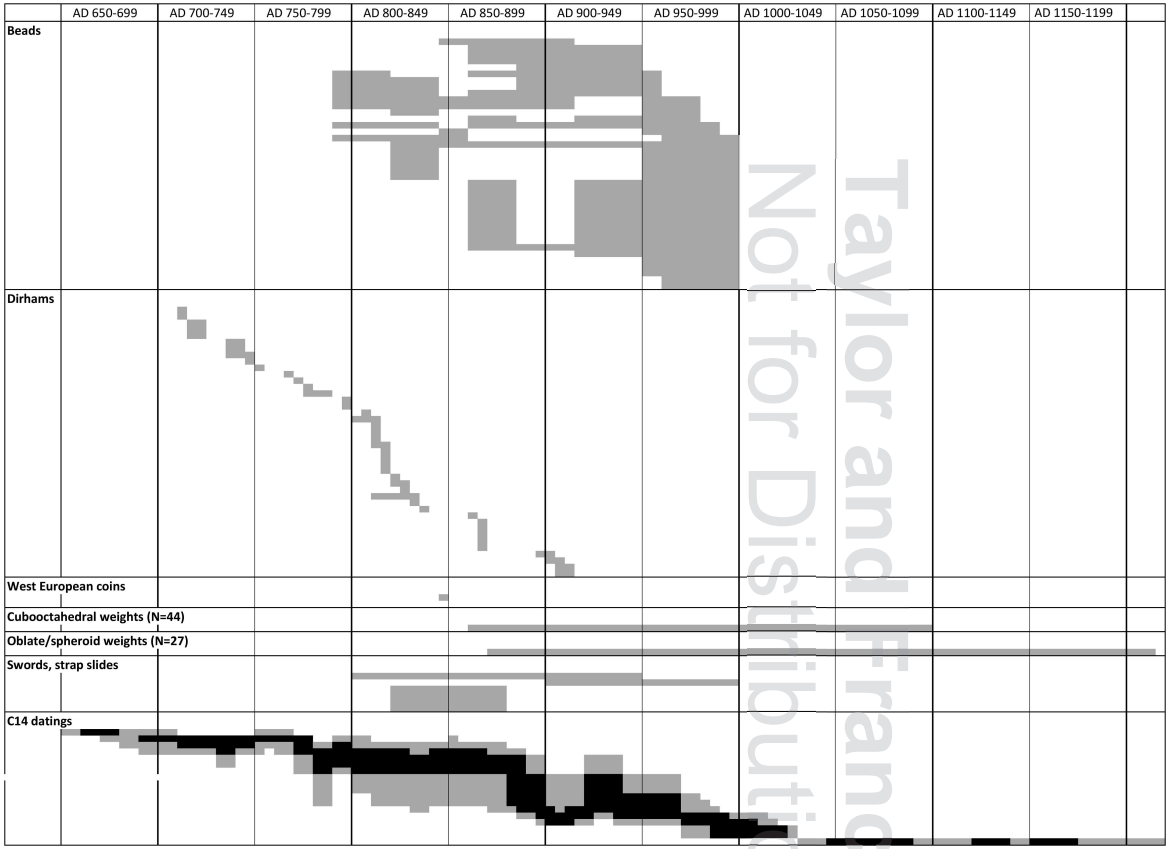

Figure 11.4 Preliminary overview of datings from the Heimdalsjordet site, with dating intervals sorted according to *terminus post quem*. The upper section shows dating intervals for individual datable beads; the coin sections give the minting dates for individual coins; the weight sections give the number and dating intervals of two datable weight types from the site; and the 'Swords, strap slides' section gives dating intervals for individual metal finds. The radiocarbon datings provided in the last section are the dates of individual samples of charred grain and hazelnut shells. One sigma probability intervals for the ^{14}C datings are marked in black; two sigma is marked in grey. The bead chronology (Callmer 1977) does not include bead use after AD 1000, but it may be assumed that several of the bead types present were also in use in the eleventh century.

Table 11.1 Frequencies of different weight types at Heimdalsjordet and Kaupang
Source: Kaupang data: Pedersen (2008).

Weights (shape, metal)	*Heimdalsjordet (N = 147)*	*Kaupang settlement and graves (N = 410)*
Various, lead	52%	81%
Oblate/spheroid, copper alloy and iron	30%	5%
Cubo-octahedral, copper alloy	18%	11%
Others, copper alloy	0%	3%
	100%	100%

the early Iron Age and continue in use in the Middle Ages (Pedersen 2008: 131–2). Other weights offer closer dating opportunities. The cubo-octahedrals occur for the first time in Scandinavia at about AD 860/70, while the oblate-spheroid weights with flat poles occur in Scandinavian contexts about ten years later (Steuer 1997: 320; Gustin 2004: 314). The cubo-octahedrals go out of use in the early twelfth century AD, while some subtypes of the oblate-spheroid weights are used into the thirteenth century AD (Steuer 1997: 320). The relative frequencies of lead weights compared to cubo-octahedrals and oblate-spheroid weights at Heimdalsjordet differ markedly from the corresponding distribution at Kaupang (see Table 11.1). This may indicate that, compared to Kaupang, a higher proportion of the activity at Heimdalsjordet took place in the late ninth century and later.

Beads

The bead material points to a dating frame that extends from the second half of the ninth and through the tenth century AD, despite the fact that there are individual beads that could be from the late eighth century. The reason for suggesting this relatively late dating is the composition of the material. The number of tubular beads of blue glass is relatively modest (N = 3), although these are generally very numerous in finds from the period AD 810/20–40 (Callmer 1977). From approximately AD 860/75, just as the white/pale turquoise ring-shaped beads disappear (also only represented by one bead at Heimdalsjordet), cornelian and rock crystal beads become common (Callmer 1977: 77, 91). These occupy a central place in the inventory of graves in the first half of the tenth century AD. The relatively high proportions of cornelian and rock crystal beads (cornelian: N = 6, rock crystal: N = 8) are significant and can point to the time from AD 860 to 950, but also later. The four silver-foil beads possibly indicate a date closer to the mid-tenth century AD, like the three colourless tubular glass beads and a blue polyhedral bead, which is dated by burial material to the mid-tenth century AD (Callmer 1977: 77, 88–90).

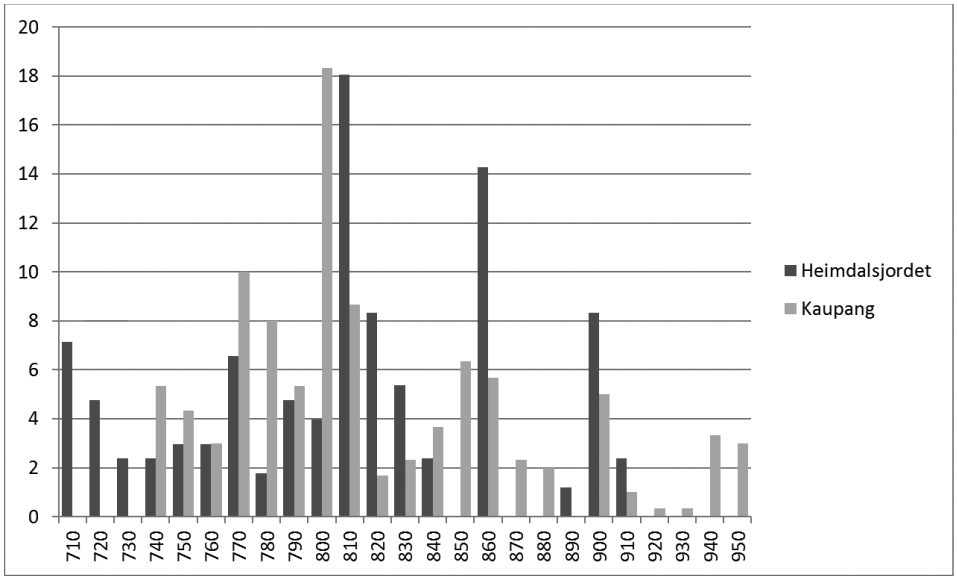

Figure 11.5 A comparison in percentages of the minting dates for 42 identified dirhams from Heimdalsjordet and 75 identified dirhams from Kaupang, following the date contribution method described in Blackburn (2008).

Coins

The 43 preliminarily identified coins (42 dirhams and one West European coin) provide further dating evidence, not the least when compared with the Kaupang material (Figure 11.5 and Blackburn 2008: Fig. 3.21). Considering the small number of coins involved, the correspondence between the two chronological distribution patterns is striking. The decline in use of money that has been suggested for Kaupang between 890 and 920 (Blackburn 2008: 52–3) also seems to have taken place at Heimdalsjordet, even if there are indications that several of the unidentified coins are Samanid, and thus may produce further tenth-century dates. What is clear, however, is that the group of pre-740 dirhams in the Heimdalsjordet assemblage constitutes a significant difference to Kaupang. In the case of Kaupang it has been suggested that all the dirhams were deposited at the site after AD 840 (Blackburn 2008: 52–3); if this is true, it might be suggested that deposition at Heimdalsjordet started some decades earlier, as pre-740 dirhams made up a larger proportion of the circulating coinage than they did from 840 onwards. For Uppåkra, a similar explanation for the presence of early dirhams has been suggested (Blackburn 2008: 54–6). As illustrated by the Loftahammar Hoard in Småland, Sweden (Blackburn 2008: 52–3), such an assumption should, however, be treated with care – among the 623 identified dirhams in this hoard more than 11 per cent are pre-750 dirhams, and its approximate *terminus post quem* date is AD 865. It thus demonstrates the significant inflow of early dirhams to Scandinavia even at this late date.

An alternative interpretation could be that Kaupang and Heimdalsjordet were supplied by slightly different bullion sources, where one of those providing silver for Heimdalsjordet consisted to a higher degree of older coins. That this could be the case is perhaps indicated by the apparent lack or scarcity of African dirhams on the site – none have been identified so far, while at Kaupang six of the 76 identified dirhams have been recognised as Tunisian or Moroccan (Rispling et al. 2008: Cat. nos. 26–9, 31, 102A). Also, the sparse representation of West European coins at Heimdalsjordet, compared to Kaupang, may indicate a different pattern of silver acquisition at the Heimdalsjordet site. This difference could either reflect true differences in the orientation of the trade networks of the two sites, a chronological difference between them or both. Mark Blackburn (2008: 57–8) has suggested that the West European coins at Kaupang represent the bullion influx before the arrival of dirhams from around AD 840. In that case the scarceness of such coins at Heimdalsjordet could be an indication of a later starting point for the use of bullion there. This would not, however, explain the apparent absence of African dirhams. An explanatory model suggesting that Heimdalsjordet was based on a more easterly oriented and perhaps complementary trading network, compared to that of Kaupang, could explain the observed differences without indicating a later starting point for the use of bullion at Heimdalsjordet.

Metalwork

Most of the metalwork from Heimdalsjordet has not been analysed yet, and cannot at present contribute to the chronological analyses. However, two sword pommels of Petersen's types H and X were found in 2013. Type H – to which the sword found in the boat grave excavated in 2012 also belongs – can be dated to the period from AD 800 to 950, while type X was in use in the period AD 900–1000 (Petersen 1919: 65, 89–101). The Carolingian strap ends and strap slides mentioned above have parallels in the Kaupang material, where they are dated to between AD 820 and AD 880 (Wamers 2011: 71–4, 91, Tab. 4.1, Fig. 4.23). A gold pendant from Heimdalsjordet has its closest parallel in the Hoen Hoard, dated to the last quarter of the ninth century (Wilson 2006: 16).

Radiocarbon dates

Hazelnut shells and grains from various stratigraphically secure contexts across the site have been ^{14}C-dated. So far, 18 datings in total have been carried out, and even if the characteristics of the radiocarbon calibration curve for the Viking Age preclude very precise interpretation, it is clear that the main phases of activity on the site fall within the ninth and tenth centuries AD. However, three datings indicate activities on the site as early as the eighth century AD, and two or three others that it was still in use in the late tenth or early eleventh century. A date from the late seventh century and one eleventh/twelfth-century

dating can probably be considered outliers. However, further radiocarbon measurements are planned to elucidate the early and late phases of the site.

Preliminary conclusion on the dating of the site

In sum, the dating evidence from the site points to a prolonged period of probably varied use. Activities seem to have started already in the eighth century but apparently were of a character not leading to the loss of beads, and not necessarily including the use of bullion. It is unclear whether the ditches were dug already at that time, or whether old materials were re-deposited in the ditches at a later date. The coin evidence seems to point to trading activities at the site at the latest from the middle of the ninth century onwards, but probably somewhat earlier. Beads, coins and metalwork all demonstrate activity on the site throughout the ninth century, and from an isolated point of view this might be considered its heyday. From the early tenth century onwards – shortly after the Gokstad ship burial – the coins apparently show a decline in silver use, while beads and possibly also weights demonstrate continued activity. Only around AD 1000 does the site seem to fall completely out of use, which is somewhat later than the date for the destruction of the Gokstad ship burial, and also the one at Oseberg – between AD 953 and AD 975 (Bill and Daly 2012).

Discussion

Although incomplete and preliminary, the above presentation may serve as basis for a first discussion of what type of locality Heimdalsjordet represents. That the manufacture of iron and fine metal products was of major importance is well attested, and so is trade, although the selections of beads, dirhams and weights indicating trade oriented particularly towards the Baltic and beyond. But was the site permanently or only temporarily occupied – was it a town or a market? The evidence is not conclusive, and hopefully ongoing analyses of the deposits in the ditches will help to elucidate the question. As for now, evidence points in both directions. The drainage ditches, so obviously intended to protect structures on the plots rather than to define their boundaries, seem to us to be indicative of some kind of permanent buildings; the same is also indicated by the fact that many ditches have been re-dug on several occasions and thus demonstrate a high degree of permanency. The findings of fish bone and large quantities of charred grain on the drier, eastern part of the parcelled area may also indicate a more permanent settlement.

On the other hand, the low-lying parts of the site were prone to flooding as late as the nineteenth century (Nicolaysen 1882: 1), which was certainly the case in the Viking Age as well – and thus not an obvious choice for a permanent settlement. Another observation may also speak against permanent occupation. Although there are several burial grounds in the close vicinity of the site, the number of identified or reported burials (from old reports, stray finds, excavations and aerial and geophysical prospection) can be counted in

tens rather than hundreds. Further excavation would certainly increase their numbers, but it seems unlikely that hundreds of graves would be found – as could be expected, had Heimdalsjordet housed a round-the-year population for any significant period. Scandinavian Viking-Age emporia with presumed permanent settlements have produced vast cemeteries; at Kaupang, the current estimate is 1,000 graves, at Birka 2,300–3,400 and at Hedeby 7,000–12,000 (Stylegar 2007: 75–8 and refs. therein). Was Heimdalsjordet perhaps permanently built-up, but only seasonally populated?

The discussion of Heimdalsjordet also has to take into consideration its location close to and its concurrency with Kaupang, as well as the fact that during its lifetime an undoubtedly royal monument, the Gokstad ship burial, was constructed only 500 m away from the site. It is clear that many of the activities that took place and many of the goods that could be acquired at Kaupang could also be found at Heimdalsjordet. Is the major difference between the two sites simply one of scale, with Heimdalsjordet as a satellite or a less successful competitor to Kaupang? The indication from the dirham identifications made so far is that Heimdalsjordet was at least not entirely supplied from Kaupang – the coins reaching the site were not a subset of types found on Kaupang but had a more easterly provenance. Also, other eastern imports – cornelian and rock crystal beads, as well as cubo-octahedral and spheroid weights – are much more frequent at Heimdalsjordet than at Kaupang. In contrast, find groups like glass beads, imported ceramics and soapstone objects are extremely underrepresented when the two sites are compared. The overall impression is that Heimdalsjordet's trade network was more focused on the easternmost trade routes than that of Kaupang, and that iron and fine metalworking made up a larger part of its production, while other handicrafts were less important. The two sites clearly differed not just in scale, but in other ways, too.

The fact that the Gokstad mound was erected so that it was well visible from Heimdalsjordet indicates that the visitors there probably constituted an important audience for its message, and the existence of the two sites is undoubtedly interconnected. This does not mean, however, that the burial owes its construction necessarily or solely to the presence of the market site. A third component of the complex may not have been detected archaeologically yet. Cadastral sources shows that in the Middle Ages the Gokstad farm was by far the largest in the parish (Nicolaysen 1882: 2), and a look at the landscape shows that it was placed at a marked topographical bottleneck where land transport could be easily controlled. Here the only convenient passage is found through a rock outcrop cutting across the large end-moraine deposits that provide Outer Vestfold with good conditions for agriculture and land transport (see Skre 2007, Fig. 1.1). It would not be surprising if the Gokstad farm's impressive size in the Middle Ages turned out to be a reflection of former grandeur – namely, that a power centre of some scale had earlier been situated here, benefitting from the control of landward communications in a rich agricultural landscape. In that case we may see Heimdalsjordet as a manifestation of a trade network established by the possessors, perhaps primarily to secure

the supply of luxury goods and bullion necessary for its own maintenance. How would such an interpretation comply with present ideas about Viking-Age trade in Scandinavia and in South-East Norway in particular?

A current suggestion for the classification of Viking-Age trading sites, based on Richard Hodges's (1982: 50–2) division of emporia into seasonal and resident sites, has been presented by Dagfinn Skre (2008b: 337–8). He divides the trading sites into four categories, each with its own set of characteristics:

1 central-place markets, which are seasonal, perform inter- and intraregional trade, and are located at and administered by central places;
2 local markets, which are seasonal, perform intraregional trade, and may be independent;
3 nodal markets, which are seasonal, perform long-distance and inter-/intraregional trade, are possibly located in border areas, and possibly stand under royal protection;
4 towns, which are permanent, perform long-distance and inter-/intraregional trade, and are located (under royal protection) in border areas.

On the basis of the discussion above, it is not evident how the Heimdalsjordet site should be classified within this system. If it is accepted that the import finds from Heimdalsjordet to a large degree arrived through a different long-distance trading network than those from Kaupang, then the site should be placed in category 3 or, if regarded as permanent, in 4 (see also Sindbæk 2005: 97; Skre 2008b: 340–1). The presence of plot divisions also supports such an interpretation. However, the proximity to Kaupang makes Heimdalsjordet a puzzling case: how could Heimdalsjordet continue to exist in competition with the much larger Kaupang? The answer is obviously that competition was not fierce enough, and one reason for this could be that the two sites were separated by a political power. Before Heimdalsjordet was known, Skre suggested, in his analysis of the political situation in Vestfold in the ninth and tenth centuries, the presence of a political border between Kaupang and more northerly areas. Following his analyses, Kaupang could have been Danish up to around AD 900, while Heimdalsjordet could have been under the control of the Norwegian Yngling kings (Skre 2007: 463–8).

It could also be, however, that the two sites served different functions. Kaupang was clearly closely connected with the Continental and western trade network, a network populated with traders of many different origins, only some of them being Scandinavians. The eastern network, towards which Heimdalsjordet seems to have been more oriented, probably consisted to a higher degree of Scandinavians, many of whom undoubtedly had various bonds of loyalty and kinship back to their homelands. The social position of the traders at Heimdalsjordet and at Kaupang may thus have been quite different; especially if, as suggested above, Gokstad represents a seat of power of sorts. If the people visiting Heimdalsjordet were not (only) traders and craftsmen who were free to go where they wanted, but (also) dependents of the power resting

at Gokstad, we may understand Heimdalsjordet as the terminal of a trade network reaching out from Gokstad and designed to provide it with metals and other imports, at the same time as it housed the craftsmen who could convert the imports into the weapons, jewellery and other items needed to maintain Gokstad's position. In such a scenario one could see Heimdalsjordet not as a town or a nodal market in the sense described above, but perhaps as a modernised central-place market, shaped to fulfil the needs of the elite at a time when international trade was becoming increasingly important, also for the uppermost strata in society. Such an interpretation will also contribute to a discussion of the difference between an exchange site of South Scandinavian origin, as suggested for Kaupang, and a more locally based counterpart.

At present, any interpretation of Heimdalsjordet and the finds made there will, of course, be extremely tentative and liable to be proven wrong in the light of the more thorough analyses still to be carried out. Nevertheless, the process of formulating and discussing such preliminary ideas is of paramount importance for future work, since it can help to identify research potentials and needs which may otherwise remain undetected. It also helps to identify with more precision similarities and differences in the composition of finds from Heimdalsjordet and Kaupang. The current discussion has highlighted the importance of comparing not only find frequencies, but also excavation methods and volumes. Also pivotal in illuminating Heimdalsjordet's relationship to Kaupang and the Gokstad burial will be attempts to trace evidence of connections. A particularly promising perspective in this direction is the study of metal supply and techniques used by the fine-metal craftsmen of the site, compared to those of Kaupang (Pedersen 2010) and those represented in the Gokstad burial equipment. Other core activities will be: to complete the analyses of the numismatic and other datable find material, to complete the radiocarbon-dating programme for the site and to understand in more detail its chronology. These steps will – hopefully – allow us in the future to understand more of what was happening when trade and handicrafts blossomed and Norway's largest ship burial was erected at a beach in Vestfold some 1,100 years ago.

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