
CHAPTER 4

METAL-WORKING RESIDUES

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4.1 Introduction

The study of the antiquity of metal-working in Sri Lanka is still in its infancy (see Maps 7 and 8). Problems ranging from the availability of very small residue collections to the use of broad definitions such as slag have further hindered this study. Indeed, recent survey and experimental work on the production of steel in mediaeval Sri Lanka is shedding new light on a period which was thought to be fully understood from a large collection of textual evidence (Juleff 1990, 1998). Slags have been recovered from a variety of sites ranging in date from 'megalithic' burial sites to mediaeval furnaces, highlighting the continuity of the production of metal objects. Deraniyagala has argued that the earliest appearance of iron technology occurred between c. 900 and 600 BC (1992: 709) and that it was imported to the island from the subcontinent (*ibid.*: 710). Furthermore he has hypothesized that the manufacture and export of high-quality iron was partly a causative factor behind the early development of Anuradhapura as a sizeable settlement in c. 800–600 BC (*ibid.*: 714). He comments also that metal-working slag occurs in every sondage from the Early Iron Age to the later Early Historic, suggesting the importance of such manufacture (*ibid.*). In addition to the iron slags recovered from Deraniyagala's sondages, iron slag has also been recovered from excavations at other settlement sites (Begley 1967: 192; Carswell and Prickett 1984: 65) and from 'megalithic' burials (Seneviratna 1984: 240–42). The metal-working residues from ASW2 can be divided into four main categories: ferrous diagnostic slags and residues, non-ferrous diagnostic residues, non-diagnostic slags and residues, and crucibles (see Table 4.1). As the majority of this material is only a by-product of metal-working, a fuller description of the processes will be offered below. A further category, stone moulds, is also considered here.

The earliest iron-smelting technology is known as the Direct Method of Iron Production. It was a single-stage process, hence 'direct', producing a malleable iron that could be smithed to an artefact. This term was used by Percy (1864: 254) to distinguish the process from the Indirect Process, which was a two-stage process, producing liquid cast iron that required a second process to convert or refine it into a malleable iron (the finery/chafery process or later the puddling process). The Indirect Method was rapidly adopted in China, but elsewhere the Direct Method provided the bulk of iron until the blast furnace technology of the Indirect Method

was adopted, which occurred at different periods in different parts of the world.

The complete cycle of manufacturing an iron artefact using the Direct Method from the ore can be divided into three distinct stages (McDonnell 1988, 1995): the smelting of the ore to produce a bloom of iron; the refining and consolidation of the bloom to a billet (primary smithing or bloom smithing); and the shaping of the billet or bar into an artefact (secondary smithing). Secondary smithing also includes the repair and recycling of artefacts.

The iron-smelting process performed two equally important functions. Firstly, the reduction of the iron oxide to the metallic state. Secondly, the formation of slag from the gangue products (e.g. silica, alumina etc.) present in the ore and the separation of the slag from the metal. The operation of a furnace is a compromise; iron ore can be readily reduced to the metal at about 800°C, but the temperature has to be elevated to about 1000°C to liquitate the slag. These two operations did not occur in the same position within the furnace. The products of the furnace were the metallic bloom and the waste slag. The morphology of the slag was dependent on the method of removal.

Primary smithing, or bloom smithing, involves the removal and consolidation of the metallic lump in the furnace. It may be heterogeneous, comprising regions free of other elements, ferritic iron; rich in carbon (steel) or phosphorus (phosphoric iron). All the regions will contain slag as slag inclusions. The product of this process was a billet of iron that could be worked up to an artefact or traded to other centres for smithing into artefacts. This process also generated waste slags and residues (see Crew 1991). In addition, secondary smithing also occurs. The manufacture of an iron object by smithing was a complicated and skilled process. All irons and steels had to be worked in the solid state by hot or cold working, joined by (high-temperature) fire welding and often finished by high-temperature heat treatments.

Distinctions must be made between the many types of smithy that have been used in the past. It is possible to smith iron on the ground with bellows and a fuel, leaving little evidence in the archaeological record. A permanent smithy would have been a more substantial structure, possibly waist-high. The smithing process produced residues, in particular scale, and silicate slag in the form of hearth bottoms and smithing slag lumps. The mechanism of slag formation is not understood

(McDonnell 1991), but these by-products do not form from the slag inclusions present in the metal dripping into the hearth. It is vital that they are recovered, quantified and analysed.

The evidence from Anuradhapura indicates that copper alloys and silver were also melted, presumably to cast objects. There is no evidence for the smelting of these metals. Secondary copper-(alloy) working requires a hearth with bellows to melt the alloys (the melting point depends on the alloy composition but is of the order of 900–1000°C). The unmelted metal or alloy was placed in a crucible, probably sealed with charcoal to stop oxidation of the metal, heated until it melted and then poured into a mould. Crucible fragments can survive, but moulds are temporary artefacts, made of sand or poorly fired clay, and therefore do not normally survive well in the archaeological record. Thus there is

often very little evidence for the type of artefact being produced. Details of copper-alloy working can be found in Tylecote 1991 and Craddock 1995.

The slags were visually examined and the classification is based solely on morphology. It is normal procedure to distinguish between diagnostic slags and non-diagnostic residues. The former can be attributed to a particular industrial process; these comprise the iron-working slags, i.e. smelting or smithing slags, and non-ferrous working debris. The second group, the non-diagnostic residues, could have been generated by a number of different processes but show no diagnostic characteristic that can identify the process. In many cases the non-diagnostic residues, e.g. hearth or furnace lining, may be ascribed to a particular process through archaeological association. The residue classifications are defined below.

4.2 Ferrous diagnostic slags and residues

A total of 24,907.5g of iron-working residues was recovered from the excavations at trench ASW2. All structural periods on the site yielded these slags, in greater or lesser quantities. It is generally assumed that all the iron-working slag recovered from an excavation is smithing slag unless proved otherwise, but some forms of smelting slag are difficult to distinguish from smithing slag. However, despite this problem, no iron-smelting slag was identified. There were only two types of iron-working slag identified in the ASW assemblage: smithing slag – randomly shaped pieces of silicate slag generated by the smithing process; and hearth bottom – a plano-convex accumulation of silicate slag formed in the smithing hearth. All would appear to have been the result of smithing operations, although one or two specimens showed characteristics of smelting slags. No slag was recovered that was definitely characteristic of smelting operations and, as such, all the slag has been listed as

smithing slag. The category includes a number of roughly bowl-shaped hearth bottoms, formed by molten and semi-molten slag collecting in the bottom of the smithing hearth, some with tiny fragments of hearth lining still adhering to them. All the slag was grey-black, vesicular to a greater or lesser extent, and dense. The earliest iron-working residues at the site were recovered from structural phase K3, which dates to the first half of the first millennium BC. In parallel, the earliest iron objects at the site also come from the same structural period. While the majority of the residues have been incorporated into old land surfaces, a number were recovered from the fills of pits, troughs and postholes. Iron slags, as mentioned above (section 4.1), have been recovered from a number of Sri Lankan sites. However the evidence from the Citadel of Anuradhapura is amongst the earliest.

Special find no: 391 Stratigraphic phase: CXIV	Context: 4nw Weight: 765.3g	Special find no: 97 Stratigraphic phase: CIV	Context: 26sw Weight: 127.3g
Special find no: 395 Stratigraphic phase: CXIV	Context: 4sw Weight: 922.8g	Special find no: 1447 Stratigraphic phase: CIV	Context: 26se Weight: 7.2g
Special find no: 851 Stratigraphic phase: CXIV	Context: 4se Weight: 137.1g	Special find no: 115 Stratigraphic phase: C	Context: 27se Weight: 231.9g
Special find no: 396 Stratigraphic phase: CXIV	Context: 4sw Weight: 326.2g	Special find no: 121 Stratigraphic phase: C	Context: 27 Weight: 73.0g
Special find no: 403 Stratigraphic phase: CXIV	Context: 4nw Weight: 85.9g	Special find no: 105 Stratigraphic phase: C	Context: 27sw Weight: 24.2g
Special find no: 387 Stratigraphic phase: CXIV	Context: 4se Weight: 102.3g	Special find no: 92 Stratigraphic phase: CIII	Context: 28nw Weight: 40.5g
Special find no: 402 Stratigraphic phase: CXIV	Context: 4nw Weight: 60.4g	Special find no: 1437 Stratigraphic phase : C	Context: 41sw Weight: 21.8g
Special find no: 404 Stratigraphic phase: CXII	Context: 5nw Weight: 11.6g	Special find no: 400 Stratigraphic phase: C	Context: 41nw Weight: 3.7g
Special find no: 403 Stratigraphic phase: CXII	Context: 5nw Weight: 18.0g	Context: 41se Stratigraphic phase: C	Weight: 71.7g
Special find no: 21 Stratigraphic phase: CVI	Context: 9ne Weight: 64.9g	Special find no: 174 Stratigraphic phase: C	Context: 41sw Weight: 236.1g

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Special find no: 920 Stratigraphic phase: CVI	Context: 9se Weight: 3.0	Special find no: 1294 Stratigraphic phase: C	Context: 41se Weight: 4.2g
Special find no: 18 Stratigraphic phase: CVI	Context: 9 Weight: 14.3g	Special find no: 161 Stratigraphic phase: C	Context: 41sw Weight: 52.8g
Special find no: 66 Stratigraphic phase: CII	Context: 14 Weight: 10.5g	Special find no: 914 Stratigraphic phase: C	Context: 41sw Weight: 18.9g
Special find no: 69 Stratigraphic phase: CII	Context: 14 Weight: 2.9g	Special find no: 397 Stratigraphic phase: C	Context: 41sw Weight: 38.8g
Special find no: 58 Stratigraphic phase: CII	Context: 14 Weight: 922.0g	Special find no: 929 Stratigraphic phase: C	Context: 41 Weight: 10.1g
Special find no: 42 Stratigraphic phase: CXI	Context: 15 Weight: 442.1g	Special find no: 137 Stratigraphic phase: C	Context: 41nw Weight: 25.3g
Special find no: 25 Stratigraphic phase: CXI	Context: 15se Weight: 6.0g	Special find no: 837 Stratigraphic phase: C	Context: 41nw Weight: 17.6g
Special find no: 53 Stratigraphic phase: CXI	Context: 15nw Weight: 89.9g	Special find no: 7721 Stratigraphic phase: XCV	Context: 42 Weight: 252.8g
Special find no: 57 Stratigraphic phase: CXI	Context: 15ne Weight: 943.7g	Special find no: 132 Stratigraphic phase: XCVI	Context: 43ne Weight: 7.9g
Special find no: 35 Stratigraphic phase: CXIII	Context: 17se Weight: 1.7g	Special find no: 198 Stratigraphic phase: XCVI	Context: 43 Weight: 8.7g
Special find no: 64 Stratigraphic phase: C	Context: 24nw Weight: 191.3g	Special find no: 1293 Stratigraphic phase: XCV	Context: 44se Weight: 36.2g
Special find no: 111 Stratigraphic phase: C	Context: 24nw Weight: 979.4g	Special find no: 197 Stratigraphic phase: XCVI	Context: 47b Weight: 316.4g
Special find no: 72 Stratigraphic phase: C	Context: 24nw Weight: 259.5g	Special find no: 279 Stratigraphic phase: XCVI	Context: 47b Weight: 67.2g
Special find no: 1145 Stratigraphic phase: XCVII	Context: 25ne Weight: 164.5g	Special find no: 136 Stratigraphic phase: XCVIII	Context: 48se Weight: 513.7g
Special find no: 931 Stratigraphic phase: XCVII	Context: 25 Weight: 5.5g	Special find no: 1468 Stratigraphic phase: XCV	Context: 49se Weight: 60.0g
Special find no: 912 Stratigraphic phase: XCVII	Context: 25 Weight: 4.9g	Special find no: 155 Stratigraphic phase: XCV	Context: 56se Weight: 411.3g
Special find no: 398 Stratigraphic phase: CIV	Context: 26 Weight: 72.1g	Special find no: 179 Stratigraphic phase: XCV	Context: 61ne Weight: 26.5g
Special find no: 853 Stratigraphic phase: CIV	Context: 26 Weight: 34.4g	Special find no: 262 Stratigraphic phase: XCIII	Context: 73nw Weight: 10.0g
Special find no: 5954 Stratigraphic phase: XCIII	Context: 73sw Weight: 23.3g	Special find no: 441 Stratigraphic phase: XCV	Context: 158nw Weight: 304.3g
Special find no: 2614 Stratigraphic phase: XCIII	Context: 73ne Weight: 2.6g	Special find no: 453 Stratigraphic phase: XCV	Context: 158nw Weight: 9.4g
Special find no: 1466 Stratigraphic phase: XCV	Context: 76ne Weight: 41.8g	Special find no: 645 Stratigraphic phase: XCV	Context: 158nw Weight: 632.3g
Special find no: 1459 Stratigraphic phase: XCV	Context: 76ne Weight: 19.6g	Special find no: 646 Stratigraphic phase: XCV	Context: 158nw Weight: 33.4g
Special find no: 1432 Stratigraphic phase: XCIX	Context: 82nw Weight: 34.3g	Special find no: 638 Stratigraphic phase: XCV	Context: 158nw Weight: 212.7g
Special find no: 1443 Stratigraphic phase: XCIX	Context: 82nw Weight: 8.6g	Special find no: 1474 Stratigraphic phase: XCV	Context: 158nw Weight: 1145.7g
Special find no: 927 Stratigraphic phase: XCV	Context: 87se Weight: 5.9g	Special find no: 1472 Stratigraphic phase: XCV	Context: 158nw Weight: 348.4g
Special find no: 1457 Stratigraphic phase: XCV	Context: 87nw Weight: 4.2g	Special find no: 669 Stratigraphic phase: XCV	Context: 158nw Weight: 45.8g

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Special find no: 932 Stratigraphic phase: XCV	Context: 87sw Weight: 6.3g	Special find no: 872 Stratigraphic phase: XCV	Context: 158nw Weight: 45.1g
Special find no: 265 Stratigraphic phase: XCV	Context: 88ne Weight: 55.3g	Special find no: 639 Stratigraphic phase: XCV	Context: 158nw Weight: 68.6g
Special find no: 1473 Stratigraphic phase: XCV	Context: 88ne Weight: 175.0g	Special find no: 630 Stratigraphic phase: XCV	Context: 158nw Weight: 934.5g
Special find no: 1455 Stratigraphic phase: XCV	Context: 97se Weight: 5.0g	Special find no: 649 Stratigraphic phase: XCV	Context: 158nw Weight: 853.8g
Special find no: 899 Stratigraphic phase: XCV	Context: 103nw Weight: 8.2g	Special find no: 5444 Stratigraphic phase: XCV	Context: 173sw Weight: 390.5g
Special find no: 928 Stratigraphic phase: XCV	Context: 107nw Weight: 1.3g	Special find no: 1442 Stratigraphic phase: XCV	Context: 215 Weight: 2.9g
Special find no: 107 Stratigraphic phase: XCV	Context: 107nw Weight: 78.3g	Special find no: 1523 Stratigraphic phase: XCV	Context: 251nw Weight: 19.2g
Special find no: 466 Stratigraphic phase: XCV	Context: 107nw Weight: 14.7g	Special find no: 1532 Stratigraphic phase: XCV	Context: 253nw Weight: 315.4gm
Special find no: 896 Stratigraphic phase: XCV	Context: 111sw Weight: 12.6g	Special find no: 1556 Stratigraphic phase: XCV	Context: 253nw Weight: 34.6g
Special find no: 1496 Stratigraphic phase: XCV	Context: 112ne Weight: 3.7g	Special find no: 1541 Stratigraphic phase: XCV	Context: 253nw Weight: 8.1g
Special find no: 959 Stratigraphic phase: XCV	Context: 123ne Weight: 85.2g	Special find no: 1672 Stratigraphic phase: XCV	Context: 256se Weight: 132.1g
Special find no: 1470 Stratigraphic phase: XCV	Context: 124nw Weight: 70.7g	Special find no: 1654 Stratigraphic phase: XCV	Context: 256se Weight: 174.7g
Special find no: 1469 Stratigraphic phase: XCV	Context: 126se Weight: 76.7g	Special find no: 1676 Stratigraphic phase: XCV	Context: 256se Weight: 127.3g
Special find no: 335 Stratigraphic phase: XCV	Context: 126se Weight: 76.0g	Special find no: 2337 Stratigraphic phase: XCV	Context: 263sw Weight: 111.0g
Special find no: 1439 Stratigraphic phase: XCV	Context: 127sw Weight: 32.2g	Special find no: 2263 Stratigraphic phase: XCV	Context: 268se Weight: 5.6g
Special find no: 898 Stratigraphic phase: XCV	Context: 134se Weight: 80.8g	Special find no: 8668 Stratigraphic phase: XCV	Context: 270se Weight: 15.3g
Special find no: 496 Stratigraphic phase: XCV	Context: 134se Weight: 63.3g	Special find no: 2339 Stratigraphic phase: XCV	Context: 273se Weight: 282.4g
Special find no: 878 Stratigraphic phase: XCV	Context: 134se Weight: 66.2g	Special find no: 2350 Stratigraphic phase: XCV	Context: 283nw Weight: 17.2g
Special find no: 847 Stratigraphic phase: XCV	Context: 134se Weight: 233.5g	Special find no: 1788 Stratigraphic phase: XCV	Context: 289ne Weight: 21.7g
Special find no: 1438 Stratigraphic phase: XCV	Context: 134 Weight: 19.6g	Special find no: 1760 Stratigraphic phase: XCV	Context: 289ne Weight: 207.3g
Special find no: 1453 Stratigraphic phase: XCV	Context: 142 Weight: 42.8g	Special find no: 2207 Stratigraphic phase: XCV	Context: 295ne Weight: 16.1g
Special find no: 431 Stratigraphic phase: XCV	Context: 142 Weight: 11.8g	Special find no: 6089 Stratigraphic phase: XCV	Context: 296ne Weight: 9.1g
Special find no: 1436 Stratigraphic phase: XCV	Context: 142se Weight: 10.6g	Special find no: 2349 Stratigraphic phase: XCV	Context: 301ne Weight: 10.7g
Special find no: 486 Stratigraphic phase: XCV	Context: 151se Weight: 23.2g	Special find no: 5956 Stratigraphic phase: XCIII	Context: 306 Weight: 21.4g
Special find no: 448 Stratigraphic phase: XCV	Context: 155 Weight: 46.2g	Special find no: 5309 Stratigraphic phase: XCV	Context: 313 Weight: 67.5g
Special find no: 631 Stratigraphic phase: XCV	Context: 158nw Weight: 451.9g	Special find no: ? Stratigraphic phase: XCV	Context: 313 Weight: 9.5g

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Special find no: 640 Stratigraphic phase: XCV	Context: 158 Weight: 25.7g	Special find no: 1790 Stratigraphic phase: XCV	Context: 316ne Weight: 8.8g
Special find no: 480 Stratigraphic phase: XCV	Context: 158nw Weight: 105.0g	Special find no: 1914 Stratigraphic phase: XCV	Context: 320ne Weight: 59.9g
Special find no: 1832 Stratigraphic phase: XCV	Context: 320ne Weight: 296.2g	Special find no: 8456 Stratigraphic phase: LXXXI	Context: 487 Weight: 3.9g
Special find no: 2202 Stratigraphic phase: XCV	Context: 320ne Weight: 11.1g	Special find no: 7090 Stratigraphic phase: LXXV	Context: 490sw Weight: 78.1g
Special find no: 2193 Stratigraphic phase: XCV	Context: 320ne Weight: 30.9g	Special find no: 8214 Stratigraphic phase: LXXV	Context: 493 Weight: 49.6g
Special find no: 1989 Stratigraphic phase: XCV	Context: 320ne Weight: 47.9g	Special find no: 7198 Stratigraphic phase: LXXV	Context: 494ne Weight: 10.0g
Special find no: 1904 Stratigraphic phase: XCV	Context: 325ne Weight: 6.7g	Special find no: 15877 Stratigraphic phase: LXX	Context: 616 Weight: 1.3g
Special find no: 1805 Stratigraphic phase: XCV	Context: 325ne Weight: 79.9g	Special find no: 16223 Stratigraphic phase: LXVIII	Context: 632nw Weight: 253.9g
Special find no: 1913 Stratigraphic phase: XCV	Context: 325ne Weight: 35.3g	Special find no: 16679 Stratigraphic phase: LXIV	Context: 698ne Weight: 22.6g
Special find no: 8666 Stratigraphic phase: XCV	Context: 325ne Weight: 29.7g	Special find no: 1729 Stratigraphic phase: LXIII	Context: 722se Weight: 46.0g
Special find no: 1865 Stratigraphic phase: XCV	Context: 331se Weight: 4.5g	Special find no: 16173 Stratigraphic phase: LIII	Context: 729nw Weight: 33.9g
Special find no: 5988 Stratigraphic phase: XCV	Context: 334ne Weight: 9.5g	Special find no: 16336 Stratigraphic phase: XLII	Context: 772sw Weight: 22.6g
Special find no: 8000 Stratigraphic phase: XCV	Context: 334ne Weight: 6.2g	Special find no: 16351 Stratigraphic phase: XLVII	Context: 791 Weight: 19.4g
Special find no: 2531 Stratigraphic phase: XCV	Context: 344nw Weight: 16.1g	Special find no: 16613 Stratigraphic phase: XXXV	Context: 837se Weight: 60.2g
Special find no: 8024 Stratigraphic phase: XCIII	Context: 345sw Weight: 144.7g	Special find no: 16594 Stratigraphic phase: XL	Context: 850ne Weight: 98.0g
Special find no: 2670 Stratigraphic phase: XCV	Context: 356se Weight: 3.0g	Special find no: 404 Stratigraphic phase: XXXIII	Context: 880nw Weight: 701.0g
Special find no: 2571 Stratigraphic phase: XCV	Context: 359nw Weight: 3.0g	Special find no: 16541 Stratigraphic phase: XXXIII	Context: 880nw Weight: 208.7g
Special find no: 2634 Stratigraphic phase: XCV	Context: 359nw Weight: 7.1g	Special find no: 16689 Stratigraphic phase: XXX	Context: 962ne Weight: 31.1g
Special find no: 8660 Stratigraphic phase: XCIII	Context: 363ne Weight: 24.1g	Special find no: 16812 Stratigraphic phase: XXXII	Context: 964sw Weight: 30.8g
Special find no: 6036 Stratigraphic phase: XCII	Context: 364ne Weight: 11.9g	Special find no: 16801 Stratigraphic phase: XXXII	Context: 964sw Weight: 36.4g
Special find no: 5428 Stratigraphic phase: XCII	Context: 365nw Weight: 83.4g	Special find no: 17351 Stratigraphic phase: XXXII	Context: 964sw Weight: 10.0g
Special find no: 2693 Stratigraphic phase: XCII	Context: 365nw Weight: 153.0g	Special find no: 16810 Stratigraphic phase: XXVIII	Context: 977sw Weight: 22.2g
Special find no: 6087 Stratigraphic phase: XCII	Context: 365nw Weight: 22.6g	Special find no: 17608 Stratigraphic phase: XXVIII	Context: 977ne Weight: 19.8g
Special find no: 2738 Stratigraphic phase: XCII	Context: 371nw Weight: 32.9g	Special find no: 10490 Stratigraphic phase: XXVIII	Context: 977ne Weight: 59.9g
Special find no: 2737 Stratigraphic phase: XCII	Context: 371nw Weight: 3.0g	Special find no: 16824 Stratigraphic phase: XXVIII	Context: 977nw Weight: 213.0g
Special find no: 8038 Stratigraphic phase: XCV	Context: 373 Weight: 8.5g	Special find no: 17057 Stratigraphic phase: XXVIII	Context: 977ne Weight: 97.0g

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Special find no: 8658 Stratigraphic phase: XCV	Context: 373nw Weight: 2.5g	Special find no: 16811 Stratigraphic phase: XXVIII	Context: 977sw Weight: 136.5g
Special find no: 5963 Stratigraphic phase: LXXXVIII	Context: 375nw Weight: 24.3g	Special find no: 16821 Stratigraphic phase: XXVIII	Context: 977nw Weight: 46.2g
Special find no: 6184 Stratigraphic phase: LXXXVI	Context: 376nw Weight: 63.2g	Special find no: 16818 Stratigraphic phase: XXVIII	Context: 977nw Weight: 23.5g
Special find no: 6283 Stratigraphic phase: XCI	Context: 386nw Weight: 165.4g	Special find no: 17072 Stratigraphic phase: XXVIII	Context: 977ne Weight: 17.7g
Special find no: 6320 Stratigraphic phase: XCV	Context: 394sw Weight: 166.9g	Special find no: 17301 Stratigraphic phase: XXVIII	Context: 977nw Weight: 14.3g
Special find no: 5971 Stratigraphic phase: XCI	Context: 406sw Weight: 17.7g	Special find no: 10479 Stratigraphic phase: XXVIII	Context: 977ne Weight: 72.3g
Special find no: 5982 Stratigraphic phase: XCV	Context: 410 Weight: 11.0g	Special find no: 17095 Stratigraphic phase: XXVIII	Context: 977se Weight: 12.8g
Special find no: 5962 Stratigraphic phase: XCI	Context: 420sw Weight: 23.1g	Special find no: 17216 Stratigraphic phase: XXVIII	Context: 977ne Weight: 18.8g
Special find no: 5426 Stratigraphic phase: XCI	Context: 424ne Weight: 22.9g	Special find no: 17223 Stratigraphic phase: XXVIII	Context: 977ne Weight: 9.1g
Special find no: 6581 Stratigraphic phase: XCI	Context: 424nw Weight: 258.2g	Special find no: 17214 Stratigraphic phase: XXVIII	Context: 977ne Weight: 9.7g
Special find no: 8463 Stratigraphic phase: XCV	Context: 429sw Weight: 43.3g	Special find no: 17357 Stratigraphic phase: XXVIII	Context: 977se Weight: 10.9g
Special find no: 6739 Stratigraphic phase: LXXXVI	Context: 457sw Weight: 751.3g	Special find no: 17085 Stratigraphic phase: XXVIII	Context: 977se Weight: 4.9g
Special find no: 10563 Stratigraphic phase: XXVIII	Context: 977sw Weight: 11.6g	Special find no: 16806 Stratigraphic phase: XXVIII	Context: 977sw Weight: 97.8g
Special find no: 17171 Stratigraphic phase: XXVIII	Context: 977ne Weight: 92.3g	Special find no: 17080 Stratigraphic phase: XXVIII	Context: 977ne Weight: 5.7g
Special find no: 10492 Stratigraphic phase: XXVIII	Context: 977ne Weight: 51.3g	Special find no: 17176 Stratigraphic phase: XXVIII	Context: 977ne Weight: 65.8g
Special find no: 16807 Stratigraphic phase: XXVIII	Context: 977sw Weight: 25.9g	Special find no: 17186 Stratigraphic phase: XXVIII	Context: 977ne Weight: 37.4g
Special find no: 17184 Stratigraphic phase: XXVIII	Context: 977ne Weight: 118.2g	Special find no: 17067 Stratigraphic phase: XXVIII	Context: 977ne Weight: 22.8g
Special find no: 17206 Stratigraphic phase: XXVIII	Context: 977ne Weight: 21.3g	Special find no: 16849 Stratigraphic phase: XXVIII	Context: 977ne Weight: 14.6g
Special find no: 10603 Stratigraphic phase: XXVI	Context: 1101nw Weight: 342.0g	Special find no: 17490 Stratigraphic phase: XXIV	Context: 1170se Weight: 164.0g
Special find no: 10575 Stratigraphic phase: XXIV	Context: 1170nw Weight: 266.4g	Special find no: 17391 Stratigraphic phase: XXII	Context: 1172se Weight: 496.2g
Special find no: 17463 Stratigraphic phase: XVIII	Context: 1175nw Weight: 16.0g	Special find no: 17272 Stratigraphic phase: XVIII	Context: 1175se Weight: 21.6g
Special find no: 17275 Stratigraphic phase: XVIII	Context: 1175nw Weight: 55.1g	Special find no: 17273 Stratigraphic phase: XVIII	Context: 1175nw Weight: 34.0g
Special find no: 10646 Stratigraphic phase: XXXVI	Context: 1206ne Weight: 124.0g	Special find no: 17500 Stratigraphic phase: XVI	Context: 1293nw Weight: 13.5g
Special find no: 17441 Stratigraphic phase: XVI	Context: 1293sw Weight: 77.6g	Special find no: 10659 Stratigraphic phase: XXXVI	Context: 1294se Weight: 19.5g
Special find no: 17317 Stratigraphic phase: XVII	Context: 1340sw Weight: 55.9g	Special find no: 17962 Stratigraphic phase: XV	Context: 1493se Weight: 62.9g
Special find no: 175?? Stratigraphic phase: XII	Context: 1496 Weight: 361.5g	Special find no: 17608 Stratigraphic phase: XII	Context: 1496 Weight: 144.0g

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Special find no: 17487 Stratigraphic phase: XII	Context: 1496sw Weight: 89.9g	Special find no: 17572 Stratigraphic phase: XIII	Context: 1502nw Weight: 9.5g
Special find no: 17569 Stratigraphic phase: XIII	Context: 1542nw Weight: 0.8g	Special find no: 17565 Stratigraphic phase: XIII	Context: 1600se Weight: 1.5g
Special find no: 17552 Stratigraphic phase: X	Context: 1615se Weight: 38.1g	Special find no: 17566 Stratigraphic phase: VIII	Context: 1616sw Weight: 12.2g
Special find no: 17570 Stratigraphic phase: IX	Context: 1693 Weight: 9.1g	Special find no: 17567 Stratigraphic phase: ?	Context: 1996se Weight: 28.1g

4.3 Non-diagnostic slags and residues

There was only one non-diagnostic residue present – cinder. The absence of identified fragments of hearth lining, i.e. the fired clay walls of a smithing hearth, is interesting and may indicate that clay-lined hearths were not used for metal-working. Cinder is a high-silica slag formed by a high-temperature reaction between silica and ferruginous material. It can be ascribed to either the non-diagnostic slags or the diagnostic slags depending on its iron content and morphology. A total of 31.9g of

cinder was recovered from ASW2's structural periods F, G and I. The earliest fragment was recovered from structural phase I7, dating to between c. 200 and 300 BC. This category of metal-working residues consisted of black, highly vesicular material. It could not be definitely ascribed to any particular process, although it was probably generated by iron-smithing activities since it was found in association with smithing slag in a number of cases.

Special find no: 2709 Stratigraphic phase: XCV	Context: 294ne Weight: 12.6g	Special find no: 2736 Stratigraphic phase: XCII	Context: 371nw Weight: 1.8g
Special find no: 2073 Stratigraphic phase: XCIII	Context: 306se Weight: 6.7g	Special find no: 5966 Stratigraphic phase: XCI	Context: 386nw Weight: 7.9g
Special find no: 2538 Stratigraphic phase: XCV	Context: 352nw Weight: 10.4g	Special find no: 10577 Stratigraphic phase: XCI	Context: 413nw Weight: 6.8g
Special find no: 2688 Stratigraphic phase: XCII	Context: 365 Weight: 12.7g	Special find no: 16618 Stratigraphic phase: XXXV	Context: 837ne Weight: 5.7g
Special find no: 2682 Stratigraphic phase: XCII	Context: 365nw Weight: 11.1g	Special find no: 17089 Stratigraphic phase: XXVIII	Context: 977ne Weight: 3.0g

4.4 Non-ferrous diagnostic residues

A number of iron-smithing slags also contained evidence of copper-alloy working in the form of corroded copper alloy. It is assumed that the smith worked both iron and copper in the same hearth. A total of 199.2g of copper-alloy working residues was recovered from the excavation at ASW2. These were mostly similar in appearance to the iron-smithing slags (dense and greyish black) but contained corroded copper-alloy fragments. Some were pale in colour and light, but showed signs of corroded copper alloy. One fragment (sf 6601) was very dense and appeared to contain a significant amount of uncorroded metal. The earliest example (sf 632) was

found in structural phase G4 and dates to between the first century BC and the first century AD. It is interesting to note that, while the majority of these residues were found incorporated into old land surfaces, a number were recovered from the fills of pits, slots and wells. By contrast, the earliest copper-alloy objects at the site were found in structural phase J3 and date to c. 400 BC. Evidence for copper-alloy working was also recovered from Deraniyagala's 1969 sondage AG at the Citadel (Deraniyagala 1972: 145). Residues were found in period 3A (ibid.), and fragments of residues adhering to crucibles were found in periods 4A and 4B (ibid.: 97–9).

Special find no: 399 Stratigraphic phase: CIII	Context: 28nw Weight: 3.1g	Special find no: 5436 Stratigraphic phase: XCV	Context: 394sw Weight: 30.0g
Special find no: 173 Stratigraphic phase: XCVI	Context: 63nw Weight: 30.4g	Special find no: 6601 Stratigraphic phase: XCI	Context: 406sw Weight: 22.5g
Special find no: 2325 Stratigraphic phase: XCV	Context: 284 Weight: 51.2g	Special find no: 6590 Stratigraphic phase: LXXXVIII	Context: 426ne Weight: 36.2g
Special find no: 6043 Stratigraphic phase: XCII	Context: 365ne Weight: 28.9g	Special find no: 15116 Stratigraphic phase: LXXXIII	Context: 632ne Weight: 20.5g
Special find no: 2763 Stratigraphic phase: XCV	Context: 368nw Weight: 4.4g		

4.5 Crucible fragments

Crucibles are ceramic vessels used for melting copper alloy, usually evidenced by intense vitrification and slagging. Fragments may have entrapped particles of metal adhering to the surface of the crucible. Eighteen fragments of crucibles weighing a total of 580.9 grams were recovered from trench ASW2. These fragments of pottery all showed evidence of heavy firing on the outside, such as vitrification, but none bore any trace of metal residue. In particular, there were two larger fragments which gave an indication of the size of crucible being used. Sf 10598 was approximately half of a slightly dished, heavy-bottomed crucible, about 6.6 cm in diameter, 3.4 cm deep and 2.1 cm thick at the base. Blackening around the rim, and the thickness of the base, would suggest that this crucible was heated from above. Sf 960A was the bottom part of a crucible, about 6 cm in diameter, with walls 1 cm thick. The upper parts had been broken off, either to remove the contents or after it was discarded. A further fragment, sf 958, had been subjected to intense heat after being broken. The earliest

example, sf 10598, was recovered from structural phase 11, dating to between c. 300 and 400 BC. Crucible fragments were also recovered from structural periods F, C, D & E, B and A, all incorporated into old land surfaces or packing. As mentioned above (section 4.4), crucibles with residues of copper-alloy working were recovered from periods 4A and 4B at Citadel sondage AG (Deraniyagala 1972: 97–9). Similar crucibles have also been recovered from Nasik (Sankalia and Deo 1955) and Ujjain (Banerjee 1965: 159, 203). It is also noteworthy to record that, while excavating Late Anuradhapura-period wattle and daub structures above Buildings A and B in the Citadel, Paranavitana found plumbago-coated crucibles (Paranavitana 1936: 3). Although some were only 4 inches in height, a complete specimen measured 10 inches (*ibid.*). As noted in Volume I, Chapter 2, plumbago – or rather graphite or black lead – is widely found within the Precambrian crystalline rocks of Sri Lanka and has been mined extensively since the 1850s (Cooray 1984: 232).

Special find no: 956	Context: 4nw
Stratigraphic phase: CXIV	Weight: 24.0g
Special find no: 958	Context: 4ne
Stratigraphic phase: CXIV	Weight: 7.3g
Special find no: 12	Context: 9
Stratigraphic phase: CVI	Weight: 13.5g
Special find no: 957	Context: 25ne
Stratigraphic phase: XCVIII	Weight: 10.8g
Special find no: 844	Context: 26sw
Stratigraphic phase: CIV	Weight: 50.3g
Special find no: 8665	Context: 173sw
Stratigraphic phase: XCV	Weight: 22.5g
Special find no: 1674	Context: 256se
Stratigraphic phase: XCV	Weight: 9.3g
Special find no: 6128	Context: 305sw
Stratigraphic phase: XCIII	Weight: 8.9g
Special find no: 8461	Context: 327ne
Stratigraphic phase: XCV	Weight: 60.7g

Special find no: 8659	Context: 332se
Stratigraphic phase: XCV	Weight: 11.1g
Special find no: 8661	Context: 363
Stratigraphic phase: XCIII	Weight: 4.5g
Special find no: 8663	Context: 364ne
Stratigraphic phase: XCII	Weight: 16.9g
Special find no: 8664	Context: 364ne
Stratigraphic phase: XCII	Weight: 22.2g
Special find no: 2782	Context: 365nw
Stratigraphic phase: XCII	Weight: 23.7g
Special find no: ?	Context: 960
Stratigraphic phase: XXX	Weight: 58.8g
Special find no: 16837	Context: 961
Stratigraphic phase: XXX	Weight: 28.3g
Special find no: 10598	Context: 1125
Stratigraphic phase: XXIII	Weight: 72.3g
Special find no: ?ml1925	Context: 12
Stratigraphic phase: CVIII	Weight: 31.7g

4.6 Moulds

Two small moulds were recovered during the excavations at trench ASW2. Special find 166, a small double-sided granite mould, was recovered from stratigraphic phase XCV during the cleaning of the centre-point pillar in the centre of the trench. Both sides of the mould have a flat-bodied, circular indentation surrounded by a register of dots fed by a V-shaped channel. One side bears, in reverse, the inscription *vacadatsa* and the other, also in reverse, the inscription *vacadataha*. Both inscriptions can be read as 'of (or belonging to) Vatsa Datta'. The final syllable in both instances represents the genitive case, but with a slight dialectic difference. Although the mould was recovered from disturbed levels, it may be assigned to between the second and first centuries BC (Coningham *et al.* 1996: 85). The purpose of the double-sided mould was presumably for issuing metal medallions as tokens or

tags. Similar moulds, albeit of unknown date, have been recovered from southern Sri Lanka (Bopearachchi and Wickremesinhe 1999: 111), in addition to the well-known corpus from Sirkap, Taxila (Marshall 1951: 507).

The second mould (sf 6963) is damaged, but it is double-sided and manufactured out of a small slab of limestone. It was recovered from stratigraphic phase LXXXI within structural period G and can thus be attributed a date of between c. the first quarter of the third century cal. BC and the latter half of the first century cal. AD. The mould bears two separate circular grooves on one side, decorated with circular indentations at intervals, fed by a single V-shaped channel. The reverse has two separate, smooth circular grooves fed by a single V-shaped channel. The surviving groove has a small V-shaped indentation, perhaps to form a small hook or lip to the object cast. It seems probable that this

was a mould for producing moulded earrings or rings. Again, similar examples have been recovered from southern Sri Lanka (Bopearachchi and Wickremesinhe 1999: 111–12), in addition to the well-known corpus from Sirkap, Taxila (Marshall 1951: 507).

Both moulds suggest that the casting of small, detailed, presumably gold or silver objects was practised at the site by around the second century BC. If the objects were of gold or silver, it is likely that the precious metals were imported as they occur only in extremely minute concentrations within Sri Lanka (Cooray 1984: 212). A circular or oval terracotta mould was recovered

Special find no: 166 Context: 346ne
Stratigraphic phase: XCV Weight: 135g
Description: Double-sided token/tag mould with V-shaped channel.
Material: Granite.
Dimensions: 3.9 x 3.4cm; 2.6cm thick.

4.7 Conclusion

There is evidence for iron smithing scattered throughout the stratigraphic sequence, save for the first two structural phases of K, but there is no evidence that iron smelting was carried out in the vicinity of the excavation. In general the quantities of smithing debris are small (less than 1 kg), which is insufficient to argue for iron smithing being practised in the buildings or areas that were excavated. These quantities are considered (from a European perspective) to be background levels, i.e. lumps and fragments of slag that become incorporated in the deposits. There is also a severe problem of residuality, in that slag is very robust and does not (normally) degrade. It can therefore be readily re-deposited, and there would be no archaeological evidence to indicate whether the slag is contemporary with, or earlier than, a particular stratigraphic sequence. We can however follow Mariani's lead when approaching such problems (Mariani 1984: 118):

One may assume that they do not indicate the precise boundaries of the craftsmen's quarters; they mark rather a generic location, since previously thickly concentrated waste materials have leached to the surface and spread all around. The presence or absence of these elements certainly indicate the kind of craft activities performed in the area.

Evidence for re-deposition must, of course, be sought in other artefact types. It is therefore possible to conclude that low levels of smithing were practised throughout the occupation of the site, but with some periods that may indicate increased activity, or activity nearer to the area excavated, resulting in increased deposition of slags, e.g. structural period B, D and phases G4 and G5. It should be noted that hammerscale, a micro-residue indicative of smithing areas, was not recovered. This further supports the hypothesis that the smithing was being practised elsewhere. There is, therefore, a question as to where the smelting was being carried out during this time. Little intensive surveying has been done in the region, and it may be possible to hypothesize that much of this was

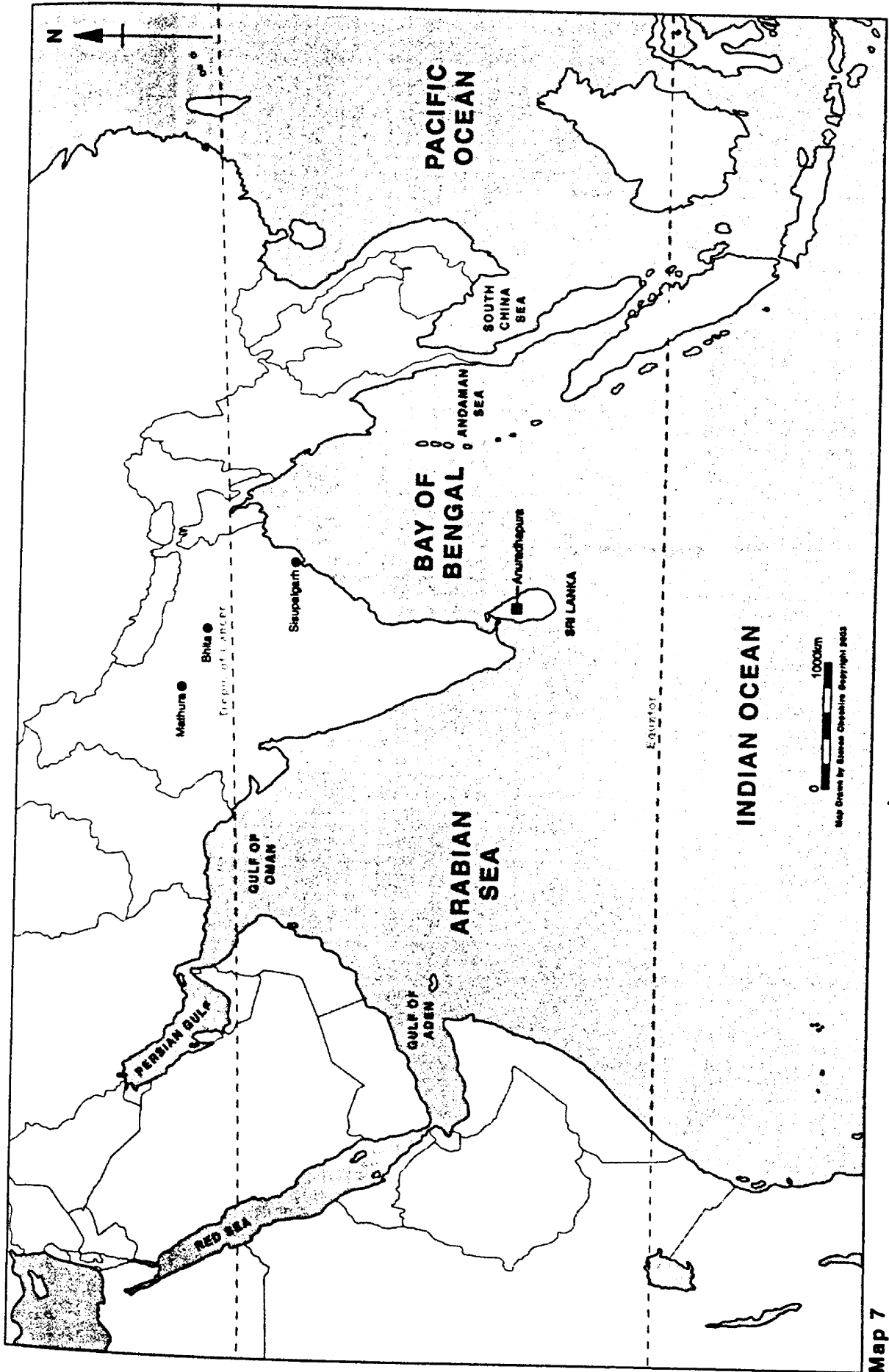
from period 4A of Deraniyagala's excavation at AG (Deraniyagala 1972: 149) (see Chapter 2: Coins). Bearing the impressions of square and circular punch-marked coins on both sides, it was interpreted by the late M.H. Sirisoma as a forger's mould (Sirisoma 1972: 150). As such terracotta moulds have been found at a number of Early Historic city sites such as Sisupalgarh, Mathura, Taxila and Bhita, it may be possible to suggest that their finds represent the location of official mints rather than forgers' mints (Coningham 1994a: 265–6).

Special find no: 6963 Context: 487ne
Stratigraphic phase: LXXXI Weight: 70g
Description: Double-sided ring mould with V-shaped channel.
Material: Limestone.
Dimensions: 5.3 x 4.5cm; 2.1cm thick.
[Plate 4.1]

carried out at village level and was then brought for smithing within the urban centre. Juleff excavated a number of smelting furnaces in the Samanawewa region of Central Province, three of which gave Early Historic dates (Juleff 1998). Perhaps such production was centred there and then diffused throughout the island.

There was also evidence of copper-alloy working in the form of a number of crucible fragments. XRF analyses of these indicate the melting of copper or leaded copper. The absence of other alloying elements, notably tin, is significant. The quantity of the evidence is small when compared to the evidence recovered from ancient Ruhuna (Weisshaar and Wijeyapala 1993), where hearths or furnaces and crucibles were recovered. Although the excavators argue for copper smelting, this is probably a misuse of terminology, since they provide no evidence for smelting, e.g. in the form of ores or slags. Thus it is hoped that the assemblage recovered from ASW2 will add to the growing corpus of data on metal-working and its residues so that a fuller understanding of the source, demand and supply networks may be achieved.

Such an understanding will need to evaluate the tantalizing evidence of written inscriptions, and their divisions of metalworkers. The earliest references to metalworkers are found in a number of Early Brahmi inscriptions recording the donation of caves to Buddhist monks (Paranavitana 1970: xcvi). These donations, dating from between the third century BC and the first century AD, only record five smiths out of a total of 1,234 inscriptions: one was a goldsmith; another the son of a goldsmith; two were coppersmiths; and another a tinsmith (ibid.). A later textual reference to such metalworkers in the *Mahavamsa* appears to subdivide them into three main groups: goldsmiths, coppersmiths and blacksmiths (Geiger 1960: 103).



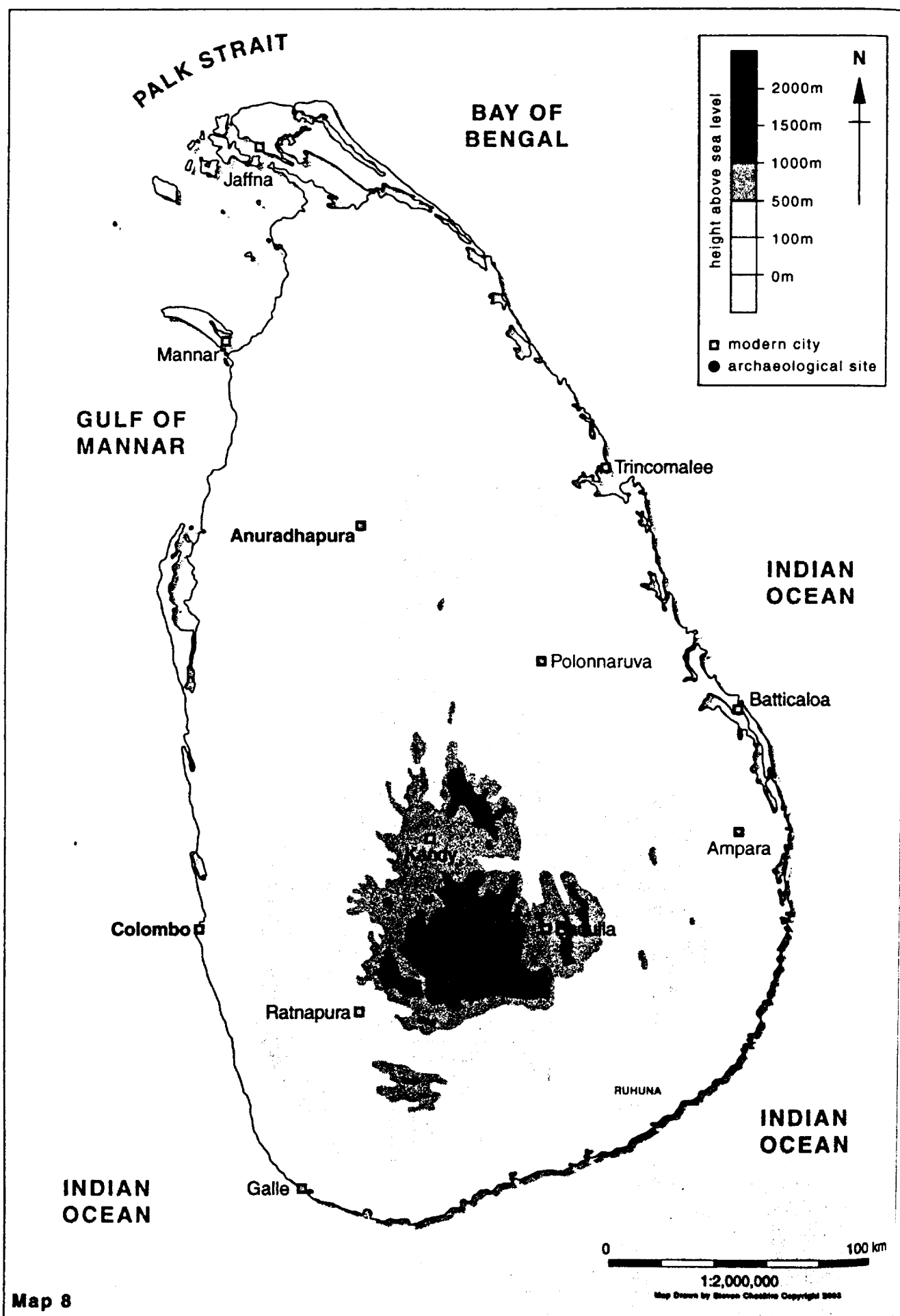


Table 4.1 Metal-working residues

Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Ferrous slags & residues											
	weight (g)	2400	5796.1	10073.4	540	1798.4	68.6	3468.4	753.5	9.1	24907.6
Non-diagnostic slags & residues											
	weight (g)				8.5	14.7		8.7			31.9
Non-ferrous slags & residues											
	weight (g)		33.5	34.3	28.9	102.5					199.2
Crucible fragments											
	weight (g)	31.3	106.8	103.6	179.8			159.4			580.9
Moulds											
	number			1		1					2
Total											
	number			1		1					2
	weight (g)	2431.3	5936.4	10211.3	757.2	1915.6	68.6	3636.5	753.5	9.1	25719.5



Limestone goldsmith's mould (sf 6963)



Limestone goldsmith's mould (sf 6963)

Plate 4.1: Metal-working objects

CHAPTER 5

GLAZED CERAMICS

Philip Seely, Sheila Canby and Robin Coningham

5.1 Introduction

Sri Lanka is situated at the centre of the maritime Silk Route, standing betwixt the West Asian and East Asian worlds. It possesses many raw resources, such as timber, spices, ivory and semi-precious stones, and is in addition one of the foremost pilgrimage centres for Theravada Buddhists. These factors, in combination with the large excess surplus available to the island's mediaeval elites ruling from Anuradhapura, led to the creation of a strong market for foreign luxury imports and glazed ceramics. This acquisitive market appears to have reached a peak at the turn of the first millennium AD, when we find the full array of West and East Asian glazed ceramics at the Citadel of Anuradhapura: Sasanian-Islamic blue glazed wares, lustre wares, lead-glazed wares and tin-glazed wares from Iraq; imitation lustre wares from Khurasan in eastern Persia; Changsha painted stonewares from central China, Yue green wares from South China, and Xing and Ding wares from North China.

In this chapter we will examine the date and provenance of all 338 glazed ceramics recovered from trench Anuradhapura Salgaha Watta 2. Table 5.1 illustrates the four main categories of glazed ceramics and their broad periodized phasing, making it clear that their presence is a relatively late phenomenon building on trade networks established centuries earlier. This chapter will discuss the different categories of pottery recovered and provide a full catalogue of the finds. In addition it will evaluate how the presence of certain types of glazed pottery in the sequence can help us understand the economic history of Anuradhapura and its place in the commerce of the Indian Ocean (Maps 9 and 10).

5.2 West Asian ceramics

As is clear from Table 5.2, West Asian glazed ceramics account for the majority of glazed ceramics from ASW2 – 306 sherds out of a total count of 338. The highest concentration of sherds is found in period C, D & E and in period B. A further 14 sherds were recovered from the mixed modern deposits of period A, and 8 sherds from periods F and G. The latter are the earliest examples of glazed ceramics at the site and will be further discussed in sections 5.2.6 (The Sasanian-Islamic wares) and 5.6 (Dating the glazed ceramics). The overall collection dates to between Sasanian-early Islamic times or perhaps even earlier, the Parthian period, and the 11th century AD.

5.2.1 Lustre ware

The collection contains a significant number of lustre-painted sherds. The body is a smooth yellow earthenware and is coated in a white tin glaze, with over-glaze painting in lustre. The lustre comes in various hues: amber, yellow, ruby, red-brown, light brown and dark brown. Usually the sherds show monochrome lustre painting, but there are a number of polychrome combinations. Designs are non-figural, as far as may be judged, and dots, circles and stripes are the main motifs. The main vessel type they seem to represent is the flared conical bowl. Through their stylistic features and their yellow earthenware body material they can be confidently assigned to the Abbasid group from Iraq (and possibly Iran too) and dated to the ninth and tenth centuries AD. As demonstrated by Table 5.2 (The West Asian Ceramics), a total of 33 sherds of this ware was recovered from ASW2: 6 from period B and a further 27 from the fills of the robber pitting phase C, D & E. Similar sherds of lustre ware have also been recovered in Sri Lanka, notably from Mantai (Carswell and Prickett 1984: 64). Numerous finds of this type have been found at Siraf in the Gulf (Whitehouse 1968: 15; Tampoe 1989: 36) and some examples on the East African coast at Kilwa (Chittick 1974: 305).

Special find no: 348 Context: 9se
Stratigraphic Phase: CVI Weight: 1g
Description: Wall sherd of bowl: interior bears designs in brown lustre with subsidiary painting in amber lustre; a small stripe of amber lustre on exterior; white tin glaze.
Technique: Polychrome lustre; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 0.6 - 0.4cm thick.
Date: 9th century Provenance: Iraq

Special find no: 353 Context: 27sw
Stratigraphic Phase: C Weight: 4g
Description: Wall sherd of bowl: white tin glaze; one side with faded brown lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3 x 2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 156 Context: 41sw
Stratigraphic Phase: C Weight: 4g
Description: Wall sherd of bowl; white tin glaze; outer side bears two hues of lustre - brown and amber - with a design of small 'v's filling most of the surface; inner side bears amber lustre spots and a wide amber lustre band.
Technique: Polychrome lustre pottery; white tin glaze.

Material: Yellow earthenware.
Dimensions: 3.6 x 2.9cm; 0.5cm thick.
Date: 9th century Provenance: Iraq

Special find no: 109 Context: 24
Stratigraphic Phase: C Weight: 13g
Description: Base and foot ring sherd of bowl; white tin glaze on all surfaces; thick lustre stripes above foot; vessel interior bears a design of thick lustre circle and small lustre stripes and specks within.
Technique: Lustre pottery; white tin glaze.
Material: Yellowish earthenware; flinty.
Dimensions: 5 x 3cm; foot height 0.6cm.
Date: 9th - 10th century Provenance: Iraq
[Plate 1.1; Fig. 5.1]

Special find no: 70 Context: 24
Stratigraphic Phase: C Weight: 2g
Description: Wall sherd of bowl; white tin glaze; amber lustre designs on interior; exterior bears chocolate lustre designs.
Technique: Polychrome lustre; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.4cm thick.
Date: 9th century Provenance: Iraq

Special find no: 148 Context: 47
Stratigraphic Phase: XCVI Weight: 3g
Description: Wall sherd; white tin glaze; outer side bears faded brown lustre stripes.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 8039 Context: 251sw
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; glazed surface is lost except in one side where half of it remains; white tin glaze with deteriorated remnants of lustre painting.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4 x 2cm; 0.5-0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 1566 Context: 266se
Stratigraphic Phase: XCV Weight: 2g
Description: Tapered everted rim sherd of bowl; white tin glaze; inner side with ruby lustre stripes; exterior with ruby lustre stripes.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.2 x 2.8cm; 0.5cm thick.
Date: 9th century Provenance: Iraq
[Plate 1.1]

Special find no: 6313 Context: 394sw
Stratigraphic Phase: XCV Weight: 0.2g
Description: Small wall sherd; white tin glaze; one side seems to bear trace of amber lustre.
Technique: White tin glaze pottery; lustre.
Material: Yellow earthenware.
Dimensions: Width 0.8cm; 0.2cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 6311 Context: 394sw
Stratigraphic Phase: XCV Weight: 3g
Description: Rim sherd; white tin glaze with fresh lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellowish earthenware.
Dimensions: 1.9 x 1.5cm; 0.3cm thick.
Date: 9th - 10th century? Provenance: Iraq

Special find no: 5143 Context: 88ne
Stratigraphic Phase: XCV Weight: 2g
Description: Rim or wall sherd of narrow curvature; interior unglazed; exterior seems to bear white glaze with remnants of red-brown lustre. Pot?
Technique: Lustre pottery; white tin glaze (?)

Material: Greyish earthenware (?)
Dimensions: 2 x 1.5cm; 0.4cm thick.
Date: 9th - 10th century(?) Provenance: Iraq(?)

Special find no: 2777 Context: 296ne
Stratigraphic Phase: XCV Weight: 0.6g
Description: Body sherd; both sides bear white glaze.
Technique: Lustre pottery; white tin glaze.
Material: Yellowish earthenware.
Dimensions: 1.1 x 1.1cm; 0.5cm thick.
Date: 9th - 10th century? Provenance: Iraq

Special find no: 2351 Context: 285
Stratigraphic Phase: XCV Weight: 0.4g
Description: Base or wall sherd of bowl; white tin glaze; interior with lustre painting, and a speck of lustre on small area of exterior glaze.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: /
Date: 9th - 10th century Provenance: Iraq

Special find no: 2271 Context: 103nw
Stratigraphic Phase: XCV Weight: 2g
Description: Wall sherd; white tin glaze; both sides bear amber lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 2247 Context: 78se
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; white tin glaze; both sides with amber lustre.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 2246 Context: 78se
Stratigraphic Phase: XCV Weight: 0.6g
Description: Wall sherd of bowl; white tin glaze; inner side covered by amber lustre; a darker hue of lustre on exterior - not necessarily polychrome.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: Width 1cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 1877 Context: 332se
Stratigraphic Phase: XCV Weight: 4g
Description: Angled wall sherd; white tin glaze; both sides with amber lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: Width 3cm; 0.4-0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 1818 Context: 320ne
Stratigraphic Phase: XCV Weight: 2g
Description: Wall sherd of bowl; white tin glaze; exterior bears thick tawny lustre stripes; interior bears amber lustre. Probably polychrome lustre.
Technique: Lustre pottery; white tin glaze. (polychrome lustre)
Material: Yellow earthenware.
Dimensions: Width 2cm.
Date: 9th century Provenance: Iraq

Special find no: 1783 Context: 320ne
Stratigraphic Phase: XCV Weight: 0.6g
Description: Wall sherd; white tin glaze; one side with amber lustre painting, the other with orange-yellow lustre.
Technique: Polychrome lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2 x 1cm; 0.4cm thick.
Date: 9th century Provenance: Iraq

Special find no: 1733 Context: 320ae
Stratigraphic Phase: XCV Weight: 4g
Description: Wall sherd of bowl; white tin glaze; outer side bears two hues of lustre - brown and amber - with a design of small 'v's filling most of the surface; inner side bears amber lustre spots and a wide amber lustre band.
Technique: Polychrome lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 2cm; 0.5cm thick.
Date: 9th century Provenance: Iraq

Special find no: 1667 Context: 285ae
Stratigraphic Phase: XCV Weight: 5g
Description: Base and foot ring sherd; white tin glaze, exterior above foot bears lustre stripes; bowl.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.5 x 2cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 1552 Context: 255ae
Stratigraphic Phase: XCV Weight: 6g
Description: Tapered, everted rim sherd; white tin glaze with fresh lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellowish earthenware.
Dimensions: 3.8 x 3.8cm; 0.4cm thick.
Date: 9th - 10th century? Provenance: Iraq
[Plate 1.1; Fig. 5.1]

Special find no: 1341 Context: 87sw
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd of bowl; white tin glaze; interior bears amber lustre designs; a small area of amber lustre on exterior.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 1320 Context: 88ne
Stratigraphic Phase: XCV Weight: 2g
Description: Base and foot sherd of bowl; white tin glaze; vessel interior surface largely covered by yellow lustre; outer area bears faded trace of yellow lustre.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 1319 Context: 88ne
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd of bowl; white tin glaze; inner side with brown lustre stripes; outer side seems to bear faded brown lustre stripes with a small area red-brown (accidental). Probably monochrome lustre.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2 x 1cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 1314 Context: 88
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd of bowl; white tin glaze; interior with amber lustre stripe, exterior with two chocolate lustre stripes.
Technique: Polychrome lustre; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 0.4cm thick.
Date: 9th century Provenance: Iraq

Special find no: 760 Context: 86ne
Stratigraphic Phase: XCV Weight: 4g
Description: Tapered, everted rim sherd of bowl; finely cracked white glaze; inner side bears amber lustre decoration.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3 x 2.5cm; 0.5cm thick.
Date: 9th/10th century Provenance: Iraq
[Fig. 5.1]

Special find no: 653 Context: 181
Stratigraphic Phase: XCV Weight: 2g
Description: Tapered rim sherd; white tin glaze, one side bearing lustre painting.
Technique: Lustre tin-glaze pottery.
Material: Yellow earthenware.
Dimensions: Width 1cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 604 Context: 56se
Stratigraphic Phase: XCV Weight: 2g
Description: Wall sherd; white tin glaze; inner side bears very faded yellow lustre.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 0.5-0.4cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 603 Context: 56se
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; white tin glaze; one side largely covered with yellow lustre, the other bearing yellow lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: Width 1.3cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 429 Context: 134
Stratigraphic Phase: XCV Weight: 2g
Description: Wall sherd; white tin glaze; one side with faded yellow lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: Width 2cm; 0.4-0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 355 Context: 111sw
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; white tin glaze; inner surface bears faded yellow lustre.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 0.4-0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 274 Context: 88ne
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; white tin glaze; one side with yellow lustre designs.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 1cm; 0.4-0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

Special find no: 214 Context: 74sw
Stratigraphic Phase: XCIV Weight: 4g
Description: Tapered rim sherd of bowl; white tin glaze; both sides bear remnants of lustre.
Technique: Lustre pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 2cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq

5.2.2 'Imitation' lustre ware

In contrast to the relatively large collection of lustreware sherds at ASW2 there is only a single sherd of what Wilkinson has termed 'imitation' lustre ware (Wilkinson 1973: 181). This ware was produced in the eastern Iranian world and is especially well known from the site of Nishapur (ibid.). The ware can be produced by either of two techniques. The first involves the painting of the design on to an opaque white glaze, while the second involves the painting of designs on to a white englobe which is then sealed by the application of a clear lead glaze. Occasionally a little tin is added to make the glaze

more milky. The glaze of sf 746 typically has a slight yellow stain in the vicinity of the pigment slip. According to Wilkinson, this ware is not a successful imitation as there is no trace of a metallic sheen or iridescence (*ibid.*), however it was clearly popular in the region of Khurasan. As with most of its 'real' counterpart at ASW2, the sherd appears to have belonged to a flared conical bowl. It can be assigned to Khurasan, perhaps even to the kilns in the vicinity of Nishapur, and dated to the ninth and tenth centuries AD. Its presence at Anuradhapura is somewhat surprising, as it has not previously been perceived as a luxury export ware. There is no reference to similar sherds having previously been found in Sri Lanka. The authors are extremely grateful to Ralph Pinder-Wilson, formerly of the British Museum, for the identification of this ware.

Special find no: 746 Context: 26se
Stratigraphic Phase: CIV Weight: 1g
Description: Tapered everted rim of bowl; interior bears designs in various shades of brown pigment; small stripes of dark and lighter brown pigment on exterior; clear lead glaze.
Technique: Monochrome pigment; clear lead glaze.
Material: Yellow earthenware.
Dimensions: 2.9 x 2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Khurasan
[Plate 1.1]

5.2.3 White tin-glazed ware

Another sizeable group, these sherds have a white tin glaze coating a smooth yellow earthenware body. Significantly, there is one with some splashed green colouring and one with some dark blue (cobalt) in-glaze colouring. Cobalt in-glaze colouring is only one variant, as turquoise, bichrome and polychrome are also found (Tampoe 1989: 35). The vessel type they seem to represent is the conical, flared bowl. Like the lustre tin-glazed group, they are also probably Abbasid wares, ninth to tenth century AD in date, and attributed to Iraq and possibly Iran. A total of 78 sherds of white tin-glazed ware were recovered from trench ASW2. Of these, 52 sherds were recovered from period C,D & E, 25 from period B and 1 from period A. This ceramic category is also found at Mantai (Carswell and Prickett 1984: 64) and it is interesting to note that, although examples of tin-glazed wares with cobalt blue decoration have been found at both Mantai (*ibid.*) and ASW2 (sfs 240 and 1323), neither site has yielded an example of tin-glazed frit-bodied ware of the middle to late twelfth century AD. A number of sherds of white tin-glazed ware were recovered from Kilwa (Chittick 1974: 303) and Siraf (Whitehouse 1968: 15; Tampoe 1989: 33).

Special find no: 351 Context: 4sw
Stratigraphic Phase: CXIV Weight: 9g
Description: Base and foot ring sherd; both sides bear white tin glaze; outer side of glazed base has a number of small pores or air holes.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.2 x 1.7cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 2258 Context: 17se
Stratigraphic Phase: CXIII Weight: 7g
Description: Body sherd; both sides bear white tin glaze; inner side bears concretion.

Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.1 x 2.5cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 2257 Context: 17se
Stratigraphic Phase: CXIII Weight: 3g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 2cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1344 Context: 5nw
Stratigraphic Phase: CXII Weight: 3g
Description: Tapered rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.8 x 1.7cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
[Fig. 5.1]

Special find no: 354 Context: 5ne
Stratigraphic Phase: CXII Weight: 6g
Description: Body sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.1 x 2.4cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 762 Context: 15nw
Stratigraphic Phase: CXI Weight: 7g
Description: Body sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.8 x 2.2cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 761 Context: 9nw
Stratigraphic Phase: CVI Weight: 7g
Description: Tapered, everted rim sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.7 x 2.4cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
[Fig. 5.1]

Special find no: 1323 Context: 9se
Stratigraphic Phase: CVI Weight: 1g
Description: Everted, tapered rim sherd; both sides bear white tin glaze; interior has cobalt splashes.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.8 x 1.7cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
[Plate 1.1]

Special find no: 1336 Context: 26se
Stratigraphic Phase: CIV Weight: 7g
Description: Body and everted, tapered rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 5 x 3.4cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
[Fig. 5.1]

Special find no: 1335 Context: 26se
Stratigraphic Phase: CIV Weight: 4g
Description: Tapered, everted rim sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.5 x 2.5cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Glazed Ceramics

- Special find no: 345 Context: 26sw
Stratigraphic Phase: CIV Weight: 27g
Description: Base and foot ring sherd of wide bottomed bowl; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 6.2 x 4.3cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
[Fig. 5.1]
- Special find no: 94 Context: 28nw
Stratigraphic Phase: CIII Weight: 5g
Description: Rounded rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4 x 1.9cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2261 Context: 27se
Stratigraphic Phase: C Weight: 12g
Description: Tapered, everted rim sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.8 x 3.7cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 1587 Context: 263nw
Stratigraphic Phase: C Weight: 31g
Description: Two sherds forming one piece: tapered, everted rim; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 6 x 5.5cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 1359 Context: 41sw
Stratigraphic Phase: C Weight: 1g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2 x 1.1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 1358 Context: 41sw
Stratigraphic Phase: C Weight: 0.3g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1 x 0.8cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 753 Context: 27sw
Stratigraphic Phase: C Weight: 14g
Description: Base and foot ring sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.9 x 3.5cm; 0.9cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 747 Context: 41se
Stratigraphic Phase: C Weight: 7g
Description: Base sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 2.1cm; 1.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 176 Context: 41se
Stratigraphic Phase: C Weight: 12g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 6 x 4.4cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
[Plate 1.1]
- Special find no: 164 Context: 41sw
Stratigraphic Phase: C Weight: 4g
Description: Two body sherds, not one piece; both sides bear fine white tin glaze.
Technique: Pottery; fine white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.6 x 3cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 160 Context: 41sw
Stratigraphic Phase: C Weight: 3g
Description: Two sherds forming one tapered rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.9 x 1.5cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 150 Context: 41nw
Stratigraphic Phase: C Weight: 2g
Description: Tapered rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 1.4cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 125 Context: 41nw
Stratigraphic Phase: C Weight: 10g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.6 x 3.4cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 759 Context: 25nw
Stratigraphic Phase: XCVII Weight: 5g
Description: Base and foot ring sherd of flared bowl; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 5.1 x 5.1cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2262 Context: 83sw
Stratigraphic Phase: XCVI Weight: 10g
Description: Two pieces forming one rounded, everted rim sherd; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.8 x 1.5cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2254 Context: 46se
Stratigraphic Phase: XCVI Weight: 8g
Description: Body sherd rounded into disc; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.9 x 2.9cm; 0.8cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 889 Context: 47nw
Stratigraphic Phase: XCVI Weight: 4g
Description: Body sherd; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.8 x 2.1cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 8558 Context: 334se
Stratigraphic Phase: XCV Weight: 1g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.7 x 1.3cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

- Special find no: 8501 Context: 311
Stratigraphic Phase: XCV Weight: 5g
Description: Body sherd; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3 x 1.8cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 6312 Context: 394sw
Stratigraphic Phase: XCV Weight: 7g
Description: Body sherd; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.8 x 3cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 6103 Context: 373se
Stratigraphic Phase: XCV Weight: 14g
Description: Base and foot ring sherd; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.2 x 2.7cm; 0.8cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 5651 Context: 394sw
Stratigraphic Phase: XCV Weight: 3g
Description: Body sherd; both sides bear white tin glaze; outer side has concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 0.8cm; 0.1cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 5649 Context: 313sw
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.6 x 1.4cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 5648 Context: 313sw
Stratigraphic Phase: XCV Weight: 3g
Description: Blunt tapered rim sherd; both sides bear white tin glaze; drill hole? at rim edge.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.8 x 2.6cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 5165 Context: 344sw
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 1.3cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 3166 Context: 325ne
Stratigraphic Phase: XCV Weight: 16g
Description: Tapered everted rim sherd; both sides bear white tin glaze; inner side has concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.8 x 3.5cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2695 Context: 294ne
Stratigraphic Phase: XCV Weight: 2g
Description: Thin tapered rim sherd; both sides bear fine white tin glaze.
Technique: Pottery; fine white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.7 x 1.5cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2666 Context: 76se
Stratigraphic Phase: XCV Weight: 8g
Description: Base and foot ring sherd of flared bowl; both sides bear fine white tin glaze.
Technique: Pottery; fine white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.4 x 3.3cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2660 Context: 292ae
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.2 x 1.5cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2620 Context: 292ae
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.6 x 1.5cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2277 Context: 261
Stratigraphic Phase: XCV Weight: 9g
Description: Foot ring and body sherd; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.6 x 2.5cm; 0.8cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2276 Context: 261
Stratigraphic Phase: XCV Weight: 3g
Description: Tapered rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2 x 2.1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2274 Context: 99se
Stratigraphic Phase: XCV Weight: 3g
Description: Rim sherd rounded into disc; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.8 x 1.8cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2273 Context: 158nw
Stratigraphic Phase: XCV Weight: 9g
Description: Body sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.7 x 3.6cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2264 Context: 269se
Stratigraphic Phase: XCV Weight: 5g
Description: Body sherd; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.2 x 1.5cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 2194 Context: 332ae
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 1.5cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
- Special find no: 1920 Context: 325ne
Stratigraphic Phase: XCV Weight: 1g

Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.8 x 1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1917 Context: 332se
Stratigraphic Phase: XCV Weight: 1g
Description: Body sherd; both sides bear fine white tin glaze.
Technique: Pottery; fine white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.5 x 1.1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1886 Context: 332se
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear good white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.4 x 2.2cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1882 Context: 332se
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 1.8cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1878 Context: 325se
Stratigraphic Phase: XCV Weight: 23g
Description: Two sherds forming one piece: one body sherd, one rounded rim and body; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.8 x 6.1cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1867 Context: 325se
Stratigraphic Phase: XCV Weight: 6g
Description: Rounded rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.8 x 2.5cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1854 Context: 331se
Stratigraphic Phase: XCV Weight: 3g
Description: Body sherd; both sides bear even smooth white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 2.1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1671 Context: 256se
Stratigraphic Phase: XCV Weight: 5g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.3 x 2.5cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1662 Context: 285se
Stratigraphic Phase: XCV Weight: 4g
Description: Body sherd rounded into disc; both sides bear white tin glaze; one side has horizontal moulding.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.4 x 2.3cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1321 Context: 107sw
Stratigraphic Phase: XCV Weight: 31g
Description: Base and shallow foot ring sherd of flared bowl; both sides bear white tin glaze with concretion.
Technique: Pottery; white tin glaze.

Material: Yellow earthenware.
Dimensions: 5.3 x 5.1cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1318 Context: 88se
Stratigraphic Phase: XCV Weight: 6g
Description: Body sherd; both sides bear white tin glaze; inner side has concretion.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4 x 2.1cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1167 Context: 92sw
Stratigraphic Phase: XCV Weight: 4g
Description: Rounded rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 2cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 1165 Context: 92sw
Stratigraphic Phase: XCV Weight: 10g
Description: Body sherd; both sides bear white tin glaze; outer side has concretion and horizontal moulding.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.1 x 3.1cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 765 Context: 121se
Stratigraphic Phase: XCV Weight: 13g
Description: Lower body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.5 x 2.8cm; 1cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 763 Context: 103sw
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.1 x 1.6cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 758 Context: 111sw
Stratigraphic Phase: XCV Weight: 6g
Description: Body sherd; both sides bear deteriorated white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 2.5cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 752 Context: 107nw
Stratigraphic Phase: XCV Weight: 34g
Description: Base and foot ring sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 5.7 x 4.2cm; 0.8cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran
[Fig. 5.1]

Special find no: 751 Context: 78se
Stratigraphic Phase: XCV Weight: 4g
Description: Rounded, everted rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.3 x 2cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 750 Context: 14se
Stratigraphic Phase: XCV Weight: 4g
Description: Rounded rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.

Material: Yellow earthenware.
Dimensions: 2.6 x 2.3cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 729 Context: 214ne
Stratigraphic Phase: XCV Weight: 1g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.9 x 1.2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 714 Context: 211ne
Stratigraphic Phase: XCV Weight: 4g
Description: Tapered, everted rim sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.5 x 2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 674 Context: 190nw
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.7 x 1.5cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 668 Context: 182se
Stratigraphic Phase: XCV Weight: 0.8g
Description: Body sherd; both sides bear fine white tin glaze.
Technique: Pottery; fine white tin glaze.
Material: Yellow earthenware.
Dimensions: 1.2 x 1.2cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 651 Context: 181
Stratigraphic Phase: XCV Weight: 4g
Description: Tapered, everted rim sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.2 x 1.8cm; 0.8cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 461 Context: 107nw
Stratigraphic Phase: XCV Weight: 9g
Description: Tapered, everted rim sherd of bowl; both sides bear fine white tin glaze.
Technique: Pottery; fine, white tin glaze.
Material: Yellow earthenware.
Dimensions: 3.8 x 2.2cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 408 Context: 133se
Stratigraphic Phase: XCV Weight: 3g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.3cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 347 Context: 43ne
Stratigraphic Phase: XCV Weight: 3g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 304 Context: 111sw
Stratigraphic Phase: XCV Weight: 2g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2 x 1.8cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 267 Context: 87
Stratigraphic Phase: XCV Weight: 9g
Description: Base and foot ring sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4 x 2.2cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 240 Context: 86ne
Stratigraphic Phase: XCV Weight: 4g
Description: Body sherd; both sides bear white tin glaze; inner side has cobalt splash.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 2.7 x 2.15cm; 0.65cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 227 Context: 86ne
Stratigraphic Phase: XCV Weight: 13g
Description: Base and foot ring sherd of bowl; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Yellow earthenware.
Dimensions: 4.8 x 2.7cm; 1.4cm ring base thickness.
Date: 9th - 10th century Provenance: Iraq and ?Iran

Special find no: 212 Context: 56sw
Stratigraphic Phase: XCV Weight: 1g
Description: Body sherd; both sides bear white tin glaze.
Technique: Pottery; white tin glaze.
Material: Smooth yellow earthenware.
Dimensions: 1.4 x 1.2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Iraq and ?Iran

5.2.4 Lead-glazed wares

This is a limited category. The sherds may bear a clear yellowish glaze, sometimes splashed with green, or alternatively the glazed surface may be entirely green. The green is derived from copper. The body is a yellow or buff earthenware. The main vessel type seems to be a conical bowl. They are not very easy to date, and dates from around the ninth to thirteenth centuries AD should be allowed. Their likely provenance is Iraq and Iran. It is interesting to note that no lead-splashed wares with sgraffiato were recovered from ASW2 and only a single sherd of this ceramic was found at Mantai (Carswell and Prickett 1984: 55). Only 11 sherds of lead-glazed wares were recovered from the trench: 6 from period C, D & E, 4 from period B and 1 from period A. Sherds of lead-glazed wares have also been recovered from Mantai (Carswell and Prickett 1984: 64; Wijeyapala and Prickett 1986: 18), but they are found as far as Kilwa on the East African coast (Chittick 1974: 303). This category has also been found at Siraf (Tampoe 1989: 37).

Special find no: 343 Context: 4nw
Stratigraphic Phase: CXIV Weight: 28g
Description: Rim sherd: one side light green glaze splash on yellowish glaze; other side yellowish glaze, white slip visible below, with green splashes.
Technique: Pottery; slashes of green glaze on yellowish transparent glaze (lead) over white slip.
Material: Pink earthenware.
Dimensions: 6.8 x 6cm; 0.6cm thick.
Date: 9th - 13th century? Provenance: Iraq or Iran
[Plate 1.1]

Special find no: 30118 Context: 9sw
Stratigraphic Phase: CVI Weight: 16g

Description: Base and foot ring sherd; vessel interior bears yellowish glaze splashed with green; exterior, within and without foot ring bears yellowish glaze, with a couple of specks of green.
Technique: Pottery; yellowish transparent glaze (lead) splashed with green over white slip.
Material: Pink earthenware, flinty.
Dimensions: 5 x 2.5cm; 0.6cm thick.
Date: 9th - 13th century Provenance: Iraq or Iran

Special find no: 1138 Context: 9
Stratigraphic Phase: CVI Weight: 7g
Description: Base and foot ring sherd; base interior bears yellowish glaze splashed with green; outer area within and without foot bears yellowish glaze.
Technique: Lead glaze pottery; yellowish transparent glaze, splashed with green, over white slip.
Material: Pink earthenware.
Dimensions: 3 x 1.5cm; 1.4cm foot height.
Date: 9th - 13th century Provenance: Iraq or Iran
[Fig. 5.1]

Special find no: 1176 Context: 16aw
Stratigraphic Phase: CIII Weight: 7g
Description: Body sherd: one side bears yellowish glaze part splashed with green; other side bears partial glaze, yellowish, a white slip beneath.
Technique: Pottery; yellowish transparent lead glaze, splashed with green over white slip.
Material: Pink earthenware, flinty.
Dimensions: 3.5 x 2cm; 0.5cm thick.
Date: 9th - 13th century Provenance: Iraq or Iran

Special find no: 159 Context: 55
Stratigraphic Phase: XCVI Weight: 8g
Description: Base and foot ring sherd; base interior bears yellowish glaze splashed with green; outer area within and without foot bears yellowish glaze with small green splashes.
Technique: Lead glaze pottery; yellowish transparent glaze, splashed with green, over white slip.
Material: Pink earthenware, flinty.
Dimensions: 3 x 2cm; 1cm foot height.
Date: 9th - 13th century Provenance: Iraq or Iran

Special find no: 8602 Context: 128ae
Stratigraphic Phase: XCV Weight: 7g
Description: Body sherd: one side bears yellowish glaze part splashed with green; other side bears partial glaze, yellowish, a white slip beneath, with splashes of green; very abraded.
Technique: Pottery; yellowish transparent lead glaze, splashed with green over white slip.
Material: Pink earthenware.
Dimensions: 4.5 x 3.5cm; 0.5cm thick.
Date: 9th - 13th century Provenance: Iraq or Iran

Special find no: 6257 Context: 313sw
Stratigraphic Phase: XCV Weight: 20g
Description: Base and foot ring sherd; base interior bears yellowish glaze splashed with green; outer area within and without foot bears yellowish glaze.
Technique: Lead glaze pottery; yellowish transparent glaze, splashed with green, over white slip.
Material: Pink earthenware.
Dimensions: 5 x 5cm; 1.2cm foot height.
Date: 9th - 13th century Provenance: Iraq or Iran

Special find no: 1479 Context: 124ae
Stratigraphic Phase: XCV Weight: 5g
Description: Body sherd: one side bears yellowish glaze part splashed with green; other side bears glaze, yellowish, a white slip beneath, splashed with green.
Technique: Pottery; yellowish transparent lead glaze, splashed with green over white slip.
Material: Pink earthenware.
Dimensions: 3.7 x 1.6cm; 0.7cm thick.
Date: 9th - 13th century Provenance: Iraq or Iran

Special find no: 766 Context: 78ae
Stratigraphic Phase: XCV Weight: 1g

Description: Wall sherd: one side dark green glaze; other side yellowish glaze.
Technique: Pottery; green glaze/yellowish glaze (lead)
Material: Yellowish earthenware.
Dimensions: 2 x 1cm; 0.4cm thick.
Date: 9th - 13th century? Provenance: Iraq or Iran

Special find no: 671 Context: 193ae
Stratigraphic Phase: XCV Weight: 7g
Description: Rim sherd: one side light green glaze splash on yellowish glaze; other side yellowish glaze, white slip visible below.
Technique: Pottery; slashes of green glaze on yellowish transparent glaze (lead) over white slip.
Material: Pink earthenware.
Dimensions: 3.5 x 2cm; 0.6cm thick.
Date: 9th - 13th century? Provenance: Iraq or Iran

Special find no: 236 Context: 86ae
Stratigraphic Phase: XCV Weight: 56.53g
Description: Rim sherd: one side light green glaze splash on yellowish glaze; other side yellowish glaze, white slip visible below.
Technique: Pottery; slashes of green glaze on yellowish transparent glaze (lead) over white slip.
Material: Pink earthenware.
Dimensions: 7.8 x 8.9cm; 0.6cm thick.
Date: 9th - 13th century? Provenance: Iraq or Iran

5.2.5 The 'Sasanian-Islamic' wares

The Sasanian-Islamic wares, also known as blue-glazed ware owing to the use of a blue alkaline-based copper glaze (Tampoe 1989: 11), represent the second largest category of West Asian ceramics at ASW2. They are of fairly coarse manufacture, quite heavily potted, with a yellowish or greyish earthenware body. They are generally coated with a turquoise glaze, although they often appear with one side turquoise glazed, and the other coated with a cloudy, mottled glaze of a hue that ranges from yellowish grey to nearly black. Sometimes they bear rudimentary incised or moulded decoration. A number of examples were found to have barbotine decoration. The forms of this vessel, where reconstructable, are mostly large storage jars. As the name implies, they defy close dating in themselves, and dates from pre-Islamic times, quite possibly as far back as Parthian times, to early Islamic times must be allowed. The vessels from Sirkap, Taxila (Marshall 1951: 406-408), for example, probably date to the first and second centuries AD. Their provenance is probably Iraq and Iran. A total of 116 sherds were recovered, 3 from period A, 29 from period B, 76 from period C,D & E, and 4 from both periods F and G. The sherds from F and G, weighing a total of 44.4g, represent the earliest finds of glazed ceramics in the sequence. Their appearance in these periods at a date in the early centuries AD suggest that they are either intrusive or that they may represent Parthian blue glazed wares; certainly their glaze is extremely crackled, eroded and friable. Similarly early levels have also been reported at Anuradhapura by Deraniyagala (1992: 724). A further anomaly is represented by sf 1910, which consists of three joined sherds. The sherds are joined by their own fluxed glazes, suggesting an extreme heat may have been the cause. They have been interpreted as wasters, but their presence at ASW2 is difficult to accept as evidence for the presence of a kiln at the site! They may be explained as broken sherds which were accidentally subjected to intense heat in a furnace or fire. Sherds of Sasanian-

Islamic wares have also been recovered from the Abhayagiri Vihara at Anuradhapura (Wickramagamage 1984: 36; Wickramagamage *et al.* 1984: 362) as well as Mantai (Carswell and Prickett 1984: 64). Other Indian Ocean sites include Siraf (Whitehouse 1968: 14; Tampoe 1989: 31), Banbhore (Khan 1964: 54), Kilwa and Manda (Chittick 1974: 302).

Special find no: 362 Context: 4se
Stratigraphic Phase: CXIV Weight: 21g
Description: Five thick wall sherds: one side in turquoise glaze; the other glazed black. Apparently fragments of a very large vessel.
Technique: Glazed earthenware; turquoise glaze; black under-glaze?/glaze?
Material: Yellow earthenware.
Dimensions: Largest piece: 4.5 x 2.5cm; 1.2cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq, Iran?

Special find no: 360 Context: 4
Stratigraphic Phase: CXIV Weight: 11g
Description: wall sherd of large vessel; exterior bears turquoise glaze; interior bears blackish glaze.
Technique: Earthenware pottery; turquoise glaze; black glaze.
Material: Yellow earthenware.
Dimensions: Width 3cm; 1.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq, Iran?

Special find no: 356 Context: 4ne
Stratigraphic Phase: CXIV Weight: 5g
Description: Wall sherd: one side bears turquoise glaze; other side may bear a turquoise glaze, but has been too heavily deteriorated for a good assessment to be feasible.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2256 Context: 17se
Stratigraphic Phase: CXIII Weight: 3g
Description: Three sherds forming one wall sherd: outer side with turquoise glaze; inner side unglazed.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2255 Context: 17se
Stratigraphic Phase: CXIII Weight: 2g
Description: Sherd of oval cross-section, possibly from handle: turquoise glazed.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 2cm; 0.8cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2225 Context: 17se
Stratigraphic Phase: CXIII Weight: 2g
Description: Sherd with long, oval cross-section: continuous turquoise glazed surface.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2 x 1cm; 0.8cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1331 Context: 71sw
Stratigraphic Phase: CXIII Weight: 0.3g
Description: Rounded rim sherd: turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1330 Context: 71sw
Stratigraphic Phase: CXIII Weight: 2g
Description: Wall sherd: both sides seem to be coated in a turquoise glaze, heavily obscured by dirt.

Technique: Turquoise glazed earthenware.
Material: Yellowish earthenware.
Dimensions: 2 x 1cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1139 Context: 17se
Stratigraphic Phase: CXIII Weight: 3g
Description: Wall sherd: one side bears a small fragment of turquoise glaze; other side bears a mottled, yellowish black glaze, slightly pitted.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 2cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 892 Context: 69sw
Stratigraphic Phase: CXIII Weight: 2g
Description: Sherd: round everted rim of large vessel; turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 357 Context: 5
Stratigraphic Phase: CXII Weight: 6g
Description: Wall sherd: outer side with turquoise glaze; inner side with blackish glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 3 x 1.5cm; 0.9cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1322 Context: 9se
Stratigraphic Phase: CVI Weight: 10g
Description: Wall sherd of large vessel: exterior bears turquoise glaze; interior bears cloudy greyish-bluish glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 4.5 x 2cm; 0.9cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 888 Context: 9nw
Stratigraphic Phase: CVI Weight: 18g
Description: Wall sherd: outer side bears deteriorated turquoise glaze; inner side is unglazed and appears as a series of overlapping bands.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 4cm; 0.8-0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 764 Context: 9nw
Stratigraphic Phase: CVI Weight: 1g
Description: Wall sherd: each side bears turquoise glaze; one side with horizontal indentation.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 1cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 27 Context: 9
Stratigraphic Phase: CVI Weight: 4g
Description: Wall sherd of vessel: exterior bears turquoise glaze; glaze of interior is of uneven hue, greenish-bluish-blackish.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 3 x 1.5cm; 0.7-0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 995 Context: 9nw
Stratigraphic Phase: CVI Weight: 15g
Description: Wall sherd of large vessel; outer side bears turquoise glaze and moulded decoration; inner side bears rough greyish-blue glaze of uneven hue.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.

Dimensions: 4 x 3.5cm; 1cm average thickness.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran
[Plate 1.1]

Special find no: 887 Context: 26ne
Stratigraphic Phase: CIV Weight: 23.96g
Description: Body sherd: both sides bear turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthen ware.
Dimensions: 5.7 x 5.4cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 104 Context: 28
Stratigraphic Phase: CIII Weight: 8g
Description: Thick wall sherd: one side with slight horizontal ridge; both sides turquoise glazed.
Technique: Turquoise glazed earthen ware.
Material: Coarse grey earthenware.
Dimensions: Width 2.5cm; 0.8cm thick.
Date: / Provenance: /

Special find no: 8788 Context: 41se
Stratigraphic Phase: C Weight: 2g
Description: Tapered rim sherd of vessel; bears glazed surface of an uneven greyish hue.
Technique: Glazed pottery.
Material: Pink earthenware.
Dimensions: 2 x 1.5cm.
Date: 'Sasanian Islamic'? Provenance: Iraq or Iran

Special find no: 8155 Context: 41se
Stratigraphic Phase: C Weight: 0.3g
Description: Wall sherd: turquoise glaze on one side; mottled grey-blue glaze on other.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 1 x 0.5cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 886 Context: 41sw
Stratigraphic Phase: C Weight: 3g
Description: Wall sherd: exterior bears horizontal mouldings and turquoise glaze; interior bears greyish-bluish glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 1.5cm; 0.8cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 365 Context: 41se
Stratigraphic Phase: C Weight: 5g
Description: Wall sherd: outer side with turquoise glaze; inner side with blackish glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 3 x 2cm; 1.0-0.8cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 364 Context: 41se
Stratigraphic Phase: C Weight: 1g
Description: Wall sherd: one side with turquoise glaze; other side with glaze of uneven hue, turquoise-black.
Technique: Turquoise glazed earthen ware.
Material: Earthenware; colour obscured by dirt.
Dimensions: 1.5 x 1cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 363 Context: 41se
Stratigraphic Phase: C Weight: 5g
Description: Wall sherd: exterior bears turquoise glaze; interior glaze appears black.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.8-0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 172 Context: 41
Stratigraphic Phase: C Weight: 4g
Description: Wall sherd of large vessel: both sides turquoise glazed.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 2.5 x 2cm; 0.7cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 127 Context: 27sw
Stratigraphic Phase: C Weight: 54g
Description: Very thick wall sherd of large vessel: exterior bears turquoise glaze; interior bears yellowish glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware?
Dimensions: Width 4cm; 2.8cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 77 Context: 24
Stratigraphic Phase: C Weight: 12g
Description: Thick wall sherd of large vessel: both sides bearing turquoise glaze, outer side with under-glaze black stripes and shallow horizontal mouldings.
Technique: Turquoise glazed earthenware; with under-glaze black designs.
Material: Yellow earthenware.
Dimensions: 4 x 3cm; 1cm thick.
Date: ? Provenance: Iraq or Iran

Special find no: 281 Context: 51sw
Stratigraphic Phase: XCIX Weight: 6g
Description: Wall sherd; turquoise glazed on outer side, with horizontal moulding; interior bears glaze of uneven hue, greenish-black.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 2.5cm; 0.7-0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1481 Context: 25sw
Stratigraphic Phase: XCVII Weight: 3g
Description: Wall sherd; one side with horizontal moulding; both sides turquoise glazed, slightly iridescent.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 893 Context: 25sw
Stratigraphic Phase: XCVII Weight: 2g
Description: Sherd; neck of vessel? interior of narrow curvature. Interior bears turquoise glaze; small area of turquoise glazed surface survives on exterior.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 218 Context: 25se
Stratigraphic Phase: XCVII Weight: 15g
Description: Wall sherd of thick vessel; outer side bears turquoise glaze; inner side bears an unevenly hued blackish glaze.
Technique: Earthenware pottery; turquoise glaze; blackish glaze.
Material: Yellow earthenware.
Dimensions: 5 x 3cm; 0.8cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 885 Context: 47sw
Stratigraphic Phase: XCVI Weight: 14g
Description: Thick sherd; outer surface bears turquoise glaze; inner surface is rough and uneven, and is coated in a thin, pale turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 4 x 2cm; 2cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 15154 Context: 600
Stratigraphic Phase: XCV Weight: 0.6g
Description: Wall sherd; one side bears turquoise glaze; other side bears greenish-turquoise glaze.
Technique: Turquoise glazed earthenware.



Material: Yellow earthenware.
Dimensions: Width 1cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 15153 Context: 600
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; outer side bears turquoise glaze; inner side bears pale turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 1cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 15152 Context: 600
Stratigraphic Phase: XCV Weight: 6g
Description: Wall sherd; both sides lightly ribbed; exterior side bears pale turquoise glaze; inner side bears a deteriorated mottled turquoise glaze of uneven hue and rough texture.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 5 x 2.5cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 8594 Context: 347ne
Stratigraphic Phase: XCV Weight: 23g
Description: Thick body sherd; both sides turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 4.2 x 3.6cm; 1.2cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 8583 Context: 269se
Stratigraphic Phase: XCV Weight: 18g
Description: Wall sherd; on the outer side an area remains of highly deteriorated turquoise glaze; inner side appears to bear a mottled yellowish-turquoise glaze very unevenly applied, in parts pitted, and at one corner the glaze runs over the edge and down the side.
Technique: Turquoise glazed pottery.
Material: Orange earthenware?
Dimensions: Width 4.5cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 8568 Context: 320ne
Stratigraphic Phase: XCV Weight: 2g
Description: One side of sherd bears an iridescent turquoise glaze; the other bears a yellowish-grey glaze of uneven hue, and a ridge moulding.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 0.7cm average thickness.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 8560 Context: 301
Stratigraphic Phase: XCV Weight: 7g
Description: Thick sherd; apparently only one surface remaining, which bears turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 3 x 2.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 8559 Context: 325ne
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; one side with deteriorated turquoise glaze; the other with a mottled yellowish-grey glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 0.9cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 8536 Context: 331
Stratigraphic Phase: XCV Weight: 4g
Description: Thick wall sherd; one side bears turquoise glaze; the other bears a glazed surface that is one half turquoise and the other half grey.
Technique: Turquoise glazed pottery.
Material: Earthenware; colour obscured by dirt.

Dimensions: 2 x 1.5cm; 1.2cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 6620 Context: 347ne
Stratigraphic Phase: XCV Weight: 22g
Description: Body sherd; outer side bears turquoise glaze over two dark lines; inner side partially turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 6 x 2.5cm; 0.9cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
[Plate 1.1]

Special find no: 6334 Context: 394sw
Stratigraphic Phase: XCV Weight: 0.4g
Description: Sherd with turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 1cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 6316 Context: 394sw
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; upper side turquoise glazed; lower side bears mottled yellowish-turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2 x 1cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 6275 Context: 313sw
Stratigraphic Phase: XCV Weight: 6g
Description: Two sherds forming one; both sides are very rough and irregular; one side is unglazed, the other bears patches of a pitted greenish-turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Pinkish white earthenware.
Dimensions: The whole: width 3cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran (?)

Special find no: 6249 Context: 313sw
Stratigraphic Phase: XCV Weight: 0.3g
Description: Small sherd with a surface of turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 1.2 x 0.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 6071 Context: 296ne
Stratigraphic Phase: XCV Weight: 2g
Description: Wall sherd; both sides turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
Special find no: 2776 Context: 296ne
Stratigraphic Phase: XCV Weight: 2g
Description: Rounded, everted rim sherd of large vessel; turquoise glaze and horizontal mouldings on exterior and interior.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2775 Context: 296ne
Stratigraphic Phase: XCV Weight: 2g
Description: Rim sherd with bulge on upper part of exterior side; all sides bear yellowish-turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2 x 1cm; 1-0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2751 Context: 296ne
Stratigraphic Phase: XCV Weight: 7g
Description: Wall sherd; both sides turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.

Dimensions: 2.5 x 2cm; 1cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2733 Context: 368aw

Stratigraphic Phase: XCV Weight: 3g

Description: Base sherd?; at the top there is a surface of turquoise glaze; at the bottom, facing out to the side, there is a small, rough, indented surface of turquoise glaze.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 2 x 1.5 x 1cm.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2722 Context: 294ne

Stratigraphic Phase: XCV Weight: 5g

Description: Wall sherd of large vessel; exterior bears turquoise glaze; interior bears glaze of uneven hue, greyish.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 2.5 x 2cm; 1cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2635 Context: 292ne

Stratigraphic Phase: XCV Weight: 12g

Description: Wall sherd of large vessel; exterior bears horizontal ribbing and turquoise glaze; interior bears rough greyish-blue glaze of uneven hue.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: /

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2609 Context: 356aw

Stratigraphic Phase: XCV Weight: 6g

Description: Wall sherd; outer side turquoise glazed; glazed inner side appears as black and white horizontal bands.

Technique: Turquoise glazed pottery.

Material: Yellow earthenware.

Dimensions: 4 x 3cm; 0.7cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2381 Context: 295ne

Stratigraphic Phase: XCV Weight: 2g

Description: Wall sherd; both sides turquoise glazed.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 1.5 x 1cm; 1.2cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2282 Context: 325ne

Stratigraphic Phase: XCV Weight: 2g

Description: Wall sherd; both sides bear identical turquoise glaze.

Technique: Turquoise glazed pottery.

Material: Yellow earthenware.

Dimensions: Width 1.5cm; 0.6cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2280 Context: 263

Stratigraphic Phase: XCV Weight: 3g

Description: Wall sherd; outer side with turquoise glaze and moulded indentation; inner side with a more deteriorated turquoise glaze.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 2 x 1.5cm; 0.7cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2211 Context: 325ne

Stratigraphic Phase: XCV Weight: 1g

Description: Wall sherd; one side bears a pale turquoise glaze; the other side bears a glaze that may be classifiable as turquoise, but it appears yellowish-grey.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 1.5 x 0.5cm; 0.5cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 2138

Context: 285

Stratigraphic Phase: XCV

Weight: 2g

Description: Wall sherd; exterior bears turquoise glaze; interior appears yellowish-blue.

Technique: Turquoise glazed pottery.

Material: Yellow earthenware.

Dimensions: 2.5 x 1cm; 0.5cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1910

Context: 325ne

Stratigraphic Phase: XCV

Weight: 78g

Description: Three coarse sherds forming a single whole: two large sherds, with a third small sherd stuck against the outer side of one of the large sherds. In all, the outer side is apparently covered in turquoise glaze, although this is densely covered in a layer of soot or dirt, which is stuck against the glaze. The inner side seems to be covered in a yellowish-grey glaze. The surface is generally pitted and uneven. A small sherd is stuck against one of the large sherds in the following way: they adjoin each other at their respective outer, turquoise glazed surfaces in such a way as to suggest their glazes were fluxed together under heat. Therefore, this piece may represent a waster.

Technique: Turquoise glazed pottery.

Material: Friable greyish earthenware.

Dimensions: The whole: 8 x 6cm; 1cm average thickness.

Date: / Provenance: Iraq (?) Iran (?) Local (?)

Special find no: 1901

Context: 325ne

Stratigraphic Phase: XCV

Weight: 7g

Description: Wall sherd; turquoise glazed; coarse manufacture.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 3 x 2.5cm; 0.9cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1887

Context: 332se

Stratigraphic Phase: XCV

Weight: 10g

Description: Wall sherd; outer side turquoise glazed; inner side bears yellowish turquoise glaze of uneven hue.

Technique: Turquoise glazed pottery.

Material: Yellow earthenware.

Dimensions: Width 3cm; 1cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1881

Context: 324ne

Stratigraphic Phase: XCV

Weight: 1g

Description: Wall sherd; both sides turquoise glazed.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 2 x 1cm; 0.5-0.4cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1879

Context: 332se

Stratigraphic Phase: XCV

Weight: 1g

Description: Wall sherd; outer side with turquoise glaze; inner side with glaze of uneven hue, turquoise-greenish.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: 1.5 x 1cm; 0.4cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1848

Context: 331se

Stratigraphic Phase: XCV

Weight: 8g

Description: Wall sherd of large vessel; outer side bears turquoise glaze; inner side seems to have a turquoiseish glaze, heavily obscured by dirt.

Technique: Turquoise glazed earthenware.

Material: Yellow earthenware.

Dimensions: Width 3cm; 1.1cm thick.

Date: 'Sasanian Islamic' Provenance: Iraq or Iran

Special find no: 1766

Context: 316ne

Stratigraphic Phase: XCV

Weight: 0.2g

Description: Sherd with a surface of turquoise glaze.

Technique: Turquoise glazed pottery.

Material: Yellow earthenware.

- Dimensions: 1 x 0.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1762 Context: 301ne
Stratigraphic Phase: XCV Weight: 5g
Description: Wall sherd; exterior bears turquoise glaze; glaze of interior appears yellowish blue.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 3 x 2.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1753 Context: 316ne
Stratigraphic Phase: XCV Weight: 2g
Description: Sherd with a single surface of glaze; glaze heavily obscured, but seems to be turquoise.
Technique: Turquoise glazed pottery?
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1696 Context: 272se
Stratigraphic Phase: XCV Weight: 7g
Description: Thick wall sherd of vessel; outer side bears horizontal mouldings and a smooth, mottled turquoise glaze; inner side bears horizontal mouldings and a greyish-turquoise glaze of rough texture.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 4 x 2cm; 0.8-0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1626 Context: 256se
Stratigraphic Phase: XCV Weight: 6g
Description: Wall sherd; both sides bear uneven surfaces; one side bears turquoise glaze; the glazed surface of the other side appears greyish and very rough in texture.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 3 x 2cm; 0.8-0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1622 Context: 271se
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; one side convex and turquoise glazed; the other side turquoise glazed and with horizontal moulding.
Technique: Turquoise glazed earthenware.
Material: Earthenware; colour of glaze obscured by dirt.
Dimensions: 2 x 1cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1614 Context: 256se
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; exterior bears turquoise glaze; interior bears cloudy greyish-turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 0.7-0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1588 Context: 263ne
Stratigraphic Phase: XCV Weight: 9g
Description: Two wall sherds forming one piece; exterior bears turquoise glaze and mouldings; interior bears dull greyish glaze with a small patch of turquoise.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 3cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1559 Context: 262se
Stratigraphic Phase: XCV Weight: 1g
Description: Small sherd bearing a surface of turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 1cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1551 Context: 261nw
Stratigraphic Phase: XCV Weight: 17g
Description: Thick wall sherd of large vessel; turquoise glaze on both sides.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 4 x 3cm; 0.9-0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1539 Context: 254se
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; both sides turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 1cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1537 Context: 254se
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; one side with turquoise glaze; the other with glaze of uneven hue, greyish-greenish.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1530 Context: 254se
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; both sides turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1524 Context: 251swse
Stratigraphic Phase: XCV Weight: /
Description: Wall sherd of large vessel; exterior bears light horizontal mouldings and turquoise glaze; interior bears light horizontal mouldings and yellowish-turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 3.5 x 2cm; 0.8-0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1480 Context: 190nw
Stratigraphic Phase: XCV Weight: 4g
Description: Wall sherd; exterior bears light horizontal moulding and turquoise glaze; interior bears mottled greyish-blue glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1477 Context: 182se
Stratigraphic Phase: XCV Weight: 1g
Description: Sherd with a surface of turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 1.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1355 Context: 42nw
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; turquoise glazed with horizontal mouldings.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1345 Context: 97se
Stratigraphic Phase: XCV Weight: 8g
Description: Wall sherd of large vessel; exterior bears light horizontal mouldings and turquoise glaze, apparently with a few aubergine speckles; interior bears rough, deteriorated yellowish-blue glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.

Glazed Ceramics

- Dimensions: 3.5 x 3cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1342 Context: 50sw
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; one side bears turquoise glaze; the other bears a yellowish turquoise glaze with dark grey patch.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 2cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1334 Context: 130sw
Stratigraphic Phase: XCV Weight: 23g
Description: Wall and flat-topped rim of large vessel; iridescent turquoise glaze on inner and outer sides, and rim top.
Technique: Turquoise glazed pottery.
Material: Earthenware; colour obscured by dirt.
Dimensions: Width 3.5cm; 2cm thick; rim width 2cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1169 Context: 92sw
Stratigraphic Phase: XCV Weight: 7g
Description: Wall sherd; exterior bears a series of horizontal incisions under a turquoise glaze; interior bears glaze that appears yellowish-grey of uneven hue.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 3 x 2.5cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 1168 Context: 92
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; exterior bears horizontal moulding and turquoise glaze; interior bears turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 3 x 1.5cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 894 Context: 107nw
Stratigraphic Phase: XCV Weight: 2g
Description: Wall sherd; both sides with turquoise glaze and horizontal mouldings.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 0.8cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 891 Context: 134se
Stratigraphic Phase: XCV Weight: 3g
Description: Body sherd; very abraded.
Technique: Turquoise glazed earthenware.
Material: Yellowish earthenware.
Dimensions: 2.7 x 2cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 890 Context: 134se
Stratigraphic Phase: XCV Weight: 5g
Description: Thick wall sherd; one side bears turquoise glaze; other side glazed black.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 2 x 1.5cm; 1.3cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 655 Context: 184
Stratigraphic Phase: XCV Weight: 2g
Description: Thick wall sherd; both sides turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2 x 1cm; 1.1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 650 Context: 181
Stratigraphic Phase: XCV Weight: 3g
- Description: Wall sherd; one side with horizontal mouldings and turquoise glaze; other side bears glaze of uneven hue, greenish-turquoise.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 2cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 647 Context: 181
Stratigraphic Phase: XCV Weight: 4g
Description: Wall sherd; outer side with horizontal mouldings; both sides with turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 636 Context: 166
Stratigraphic Phase: XCV Weight: 11g
Description: Thick wall sherd of large vessel; exterior turquoise glazed with light horizontal moulding; interior bears cloudy greyish turquoise glaze of uneven hue.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 4 x 2cm; 1.3cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 629 Context: 56
Stratigraphic Phase: XCV Weight: 1g
Description: Sherd of triangular cross-section; two long sides and one short side. One long side bears a turquoise glazed surface; the surfaces of the other two sides are smooth and unglazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 602 Context: 52se
Stratigraphic Phase: XCV Weight: 1g
Description: Small sherd; upper side turquoise glazed; unglazed lower side tapers until it meets upper side at an edge.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 1cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 601 Context: 113
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; exterior glazed turquoise, with horizontal mouldings; interior bears glaze of uneven hue, bluish-blackish.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 2.5 x 1.5cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 456 Context: 134se
Stratigraphic Phase: XCV Weight: 10g
Description: Two similar wall sherds, from large vessel; each side coated with a cloudy turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 3 x 1.5cm; 2 x 1cm; both 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 359 Context: 45
Stratigraphic Phase: XCV Weight: 4g
Description: Thick wall sherd; both sides turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Grey yellowish earthenware.
Dimensions: 3 x 1.5cm; 1.5cm thick.
Date: 'Sasanian Islamic' (?) Provenance: Iraq or Iran (?)
- Special find no: 358 Context: 80sw
Stratigraphic Phase: XCV Weight: 14g
Description: Body sherd; both sides turquoise glazed (outer side is dark turquoise).
Technique: Turquoise glazed earthenware.
Material: Yellowish earthenware.

- Dimensions: 4.5 x 3.2cm; 0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 350 Context: 111
Stratigraphic Phase: XCV Weight: 3g
Description: Sherd with flared flat-topped rim, of large vessel; outer side with horizontal indentation below rim; all surfaces turquoise glazed.
Technique: Turquoise glazed earthenware.
Material: Yellowish earthenware.
Dimensions: Width 1.5cm; wall thickness 0.8cm; rim width 1.2cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 275 Context: 88nw
Stratigraphic Phase: XCV Weight: 1g
Description: Two wall sherds; larger sherd bears turquoise glaze on one side, and blackish glaze on other; smaller sherd bears turquoise glaze.
Technique: Turquoise glazed earthenware; blackish glaze used also.
Material: Yellow earthenware.
Dimensions: Large: 2 x 0.5cm; 1cm thick. Small: 1cm width.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 251 Context: 56se
Stratigraphic Phase: XCV Weight: 12g
Description: Wall sherd of large vessel; inner side with horizontal mouldings; both sides bear cloudy turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 4 x 3.5cm; 1.0-0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 245 Context: 80sw
Stratigraphic Phase: XCV Weight: 10g
Description: Wall sherd; one side bears turquoise glaze and moulded relief designs; the surface of the other side is uneven and seems to be glazed in a faded turquoise.
Technique: Turquoise glaze earthenware.
Material: Yellow earthenware.
Dimensions: 4.5 x 2.5cm; 1-0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 181 Context: 61ne
Stratigraphic Phase: XCV Weight: 1g
Description: Sherd; a small turquoise glazed surface on one side; the other side unglazed.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: 1.5 x 1cm; 1cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 157 Context: 49se
Stratigraphic Phase: XCV Weight: 5g
Description: Wall sherd; inner side bears a faded turquoise glaze, and horizontal indentations; outer side bears turquoise glaze, which has largely fallen away.
Technique: Turquoise glazed earthenware.
Material: Pink-orange earthenware.
Dimensions: 4 x 2.5cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 8498 Context: 74sw
Stratigraphic Phase: XCIV Weight: 8g
Description: Wall sherd; both sides with uneven surfaces; one side bears a few fragments of turquoise glaze; the other bears no glaze.
Technique: Turquoise glazed pottery.
Material: Pinkish earthenware.
Dimensions: 5 x 2.5cm; 0.7-0.6cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- Special find no: 204 Context: 74
Stratigraphic Phase: XCIV Weight: 1g
Description: Wall sherd; both sides bearing turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellow earthenware.
Dimensions: Width 1cm; 0.4cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
Special find no: 2570 Context: 73sw
- Stratigraphic Phase: XCIII Weight: 12g
Description: Wall sherd; outer side shows a trace of turquoise glaze, but is predominantly covered by an orange iridescence; inner side bears no glaze and is slightly ribbed.
Technique: Turquoise glazed pottery.
Material: Pinkish earthenware.
Dimensions: 5 x 3cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- perhaps Parthian
- Special find no: 2559 Context: 73sw
Stratigraphic Phase: XCIII Weight: 6g
Description: Wall sherd; outer side bears a glaze almost totally obscured, but turquoise is arguably visible in one or two minute areas; inner side unglazed.
Technique: Turquoise glazed pottery?
Material: Yellow earthenware.
Dimensions: 0.5 - 0.1cm each.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- perhaps Parthian
- Special find no: 5650 Context: 366se
Stratigraphic Phase: XCII Weight: 2g
Description: Body sherd; glaze has been eroded from both sides.
Technique: Glazed earthenware.
Material: Grey yellowish earthenware.
Dimensions: 2.2 x 1.6cm; 0.6cm thick.
Date: 'Sasanian Islamic' (?) Provenance: Iraq or Iran
- perhaps Parthian.
- Special find no: 2809 Context: 185ne
Stratigraphic Phase: XCII Weight: 16g
Description: Apparently a wall sherd, with a fragmentary wing rising from exterior. Exterior and wing bear irridised turquoise glaze. Inner side bears pale turquoise glaze.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 4 x 2.5cm; wall thickness 1cm.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- perhaps Parthian
- Special find no: 8590 Context: 420sw
Stratigraphic Phase: XCI Weight: 2g
Description: Wall sherd; one side bears turquoise glaze, heavily obscured by brown iridescence; the other side is unglazed.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: Width 1.5cm; 0.7cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- perhaps Parthian
- Special find no: 2378 Context: 396
Stratigraphic Phase: XCI Weight: 0.4g
Description: Wall sherd; both sides turquoise glazed.
Technique: Turquoise glazed pottery.
Material: Yellow earthenware.
Dimensions: 1 x 0.5cm; 0.5cm thick.
Date: 'Sasanian Islamic' Provenance: Iraq or Iran
- perhaps Parthian
- Special find no: 6923 Context: 470sw
Stratigraphic Phase: LXXXI Weight: 4g
Description: Body sherd; outer side bears very crackled, iridescent glaze.
Technique: Glazed earthenware.
Material: Yellowish earthenware.
Dimensions: 2.8 x 2.4cm; 0.9cm thick.
Date: 'Sasanian Islamic' (?) Provenance: Iraq or Iran
- perhaps Parthian
- Special find no: 7191 Context: 489nw
Stratigraphic Phase: LXXV Weight: 2g
Description: Thin body sherd; both sides bear very crackled turquoise glaze.
Technique: Turquoise glazed earthenware.
Material: Yellowish earthenware.
Dimensions: 1.9 x 1.5cm; 0.3cm thick.
Date: 'Sasanian Islamic' (?) Provenance: Iraq or Iran

- perhaps Parthian
[Plate 1.1]

Dimensions: /
Date: /

Provenance: Middle East

5.2.6 Undiagnostic

There are only 8 undiagnostic sherds in the entire collection of 335. A number of them are in an eroded form and may be Sasanian-Islamic sherds that have lost their glaze; others may be poorly fired examples

Special find no: 361 Context: 4se; old land surface
Stratigraphic Phase: CXIV Weight: 4g
Description: wall sherd: outer side seems to bear yellowish slip surface, possibly unglazed; inner side bears an unglazed, combed surface, slightly ribbed.
Technique: unglazed pottery.
Material: Yellow earthenware.
Dimensions: 2.5 x 2cm; 0.7cm thick.
Date: ? Provenance: Middle East?

Special find no: 2263 Context: 82nw
Stratigraphic Phase: XCIX Weight: 10g
Description: Wall sherd: one side with dull, yellowish glaze; other side with off-white glaze.
Technique: Pottery; yellowish glaze/off-white glaze.
Material: Pink earthenware, flinty.
Dimensions: 5 x 2.5cm; 0.6cm thick.
Date: 9th - 13th century Provenance: Iraq or Iran

Special find no: 1972 Context: 334ne
Stratigraphic Phase: XCV Weight: 15g
Description: Wall sherd; outer side bears an off-white glazed surface, in the central region of which there is a raised area of blue and black iridescence of irregular shape; inner side bears an unglazed, combed surface, slightly ribbed.
Technique: Glazed pottery.
Material: Yellow earthenware.
Dimensions: 5 x 2.5cm; 0.8cm thick.
Date: ? Provenance: Iraq or Iran

Special find no: 1911 Context: 325ne
Stratigraphic Phase: XCV Weight: 2g
Description: Rim sherd; deteriorated yellow glaze.
Technique: Glazed pottery.
Material: Pink-yellow earthenware.
Dimensions: Width 2cm.
Date: / Provenance: Middle East

Special find no: 1859 Context: 324ne
Stratigraphic Phase: XCV Weight: 0.3g
Description: About a dozen fragments of yellow earthenware.
Technique: /
Material: Yellow earthenware.
Dimensions: 0.5 - 0.1cm each.
Date: / Provenance: /

Special find no: 1746 Context: 316ne
Stratigraphic Phase: XCV Weight: 11g
Description: Wall sherd of unglazed earthenware.
Technique: Unglazed pottery.
Material: Yellow earthenware.
Dimensions: 5 x 2.5cm; 0.9-0.7cm thick.
Date: / Provenance: Middle East?

Special find no: 1478 Context: 124ne
Stratigraphic Phase: XCV Weight: 6g
Description: Unglazed (or lost glaze) yellow earthenware wall sherd.
Technique: /
Material: Yellow earthenware.
Dimensions: 3 x 2cm; 1cm thick.
Date: / Provenance: Iraq or Iran

Special find no: 1337 Context: 76ne
Stratigraphic Phase: XCV Weight: 1g
Description: Wall sherd; yellow-orange glaze.
Technique: Yellow glazed earthenware.
Material: Red-pink earthenware.

5.2.7 Buff ware

Buff ware sherds represent a large group of sherds at ASW2. It should be stressed that this term is purely descriptive and cannot be linked with other uses of this term such as at Nishapur (Wilkinson 1973: 53). They are unglazed, with a light tan to buff or red earthenware body, with sand-tempered fabric. A large proportion of them have a black coating on the interior (very occasionally on the exterior as well), with the other side either plain or with a thin white slip coating. Vessel types include jars with, so far as may be judged, either of two bases, a flat circular one or a narrow flaring shaft typical of an amphora. This category of ceramics, also found at Mantai, have been previously identified as Sasanian or Early Islamic and dated to between the fifth and ninth centuries AD by Wijeyapala and Prickett (1986: 17). Although the latter authors have identified the black coating as resin, molecular studies carried out in 1996 by Dr Carl Heron of the Department of Archaeological Sciences, University of Bradford, have shown that it is in fact bituminous (Heron, pers. comm.). It is interesting to note that two sherds of unglazed red earthenware at Siraf were also found to bear a bitumen coating, presumably for liquid storage (Tampoe 1989: 11). They have been included under West Asian glazed ceramics as they are from that region and because they have been treated with an exterior coating. Although, with a total of 59 sherds, they may not represent the largest number of West Asian ceramics, they certainly account for the highest weight count with 2232g: 36 sherds were recovered from period C,D & E, 15 from period B and 14 from period A. As mentioned above, sherds of buff ware have also been recovered from Mantai (Wijeyapala and Prickett 1986: 17), as well as from the southern rampart site in the Citadel of Anuradhapura (Ueyama and Nozaki 1993).

Special find no: 30103 Context: 1sw
Stratigraphic Phase: CXVIII Weight: 31g
Description: Body sherd; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 5.6 x 4.1cm; 1.2cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30114 Context: 4se
Stratigraphic Phase: CXIV Weight: 7g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 3.2 x 3cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30112 Context: 4nw
Stratigraphic Phase: CXIV Weight: 42g
Description: Body sherd towards base of amphora; narrow flaring shaft without base; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7 x 4cm; 1.1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30106 Context: 4ne
Stratigraphic Phase: CXIV Weight: 40g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7 x 4.2cm; 1.2cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30105 Context: 4sw
Stratigraphic Phase: CXIV Weight: 167g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 10.5 x 9.6cm; 1.2cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30102 Context: 4nw
Stratigraphic Phase: CXIV Weight: 17g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4 x 3.8cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30101 Context: 4sw
Stratigraphic Phase: CXIV Weight: 36g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip with some areas of bitumen.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.4 x 7cm; 1.1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8628 Context: 4se
Stratigraphic Phase: CXIV Weight: 70g
Description: Body sherd; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 5.6 x 5.5cm; 1.8cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8626 Context: 17se
Stratigraphic Phase: CXIII Weight: 45g
Description: Body sherd; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.5 x 5.4cm; 1.5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8625 Context: 17se
Stratigraphic Phase: CXIII Weight: 13g
Description: Body sherd; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4 x 2.2cm; 1.6cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30109 Context: 5ne
Stratigraphic Phase: CXII Weight: 9g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4 x 3cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8622 Context: 15nw
Stratigraphic Phase: CXI Weight: 29g
Description: Body sherd; no bitumen on interior; exterior bears white slip.

Technique: Earthenware with thin white slip on exterior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6.5 x 5.1cm; 1.5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8612 Context: 15nw
Stratigraphic Phase: CXI Weight: 42g
Description: Body sherd; interior bears bitumen coating.
Technique: Earthenware with bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 5 x 5cm; 1.1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8619 Context: 19sw
Stratigraphic Phase: CX Weight: 5g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 2.6 x 2.5cm; 1.1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8610 Context: 19sw
Stratigraphic Phase: CX Weight: 4g
Description: Two body sherds; interiors bear bitumen coating; exteriors bear white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4.4 x 3.5cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8608 Context: 94ne
Stratigraphic Phase: CIII Weight: 14g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 3.2 x 2.1cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8618 Context: 14sw
Stratigraphic Phase: CII Weight: 16g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4.4 x 3cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8623 Context: 24ne
Stratigraphic Phase: C Weight: 17g
Description: Body sherd; no bitumen coating or white slip.
Technique: Earthenware.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.2 x 2.7cm; 5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8624 Context: 25ne
Stratigraphic Phase: XCVII Weight: 50g
Description: Body sherd; no bitumen or slip.
Technique: Earthenware.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6.7 x 6.2cm; 1.1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8605 Context: 25ne
Stratigraphic Phase: XCVII Weight: 45g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.5 x 6cm; 1.4cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Glazed Ceramics

Special find no: 8601 Context: 25nw
Stratigraphic Phase: XCVII Weight: 20g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.5 x 5cm; 1.3cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8600 Context: 25nw
Stratigraphic Phase: XCVII Weight: 3g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 2.1 x 2.1cm; 0.5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8613 Context: 83sw
Stratigraphic Phase: XCVI Weight: 62g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 8.7 x 6.5cm; 1cm thick.
Date: 5th - 9th century
Provenance: Iraq or Iran?

Special find no: 30117 Context: 256
Stratigraphic Phase: XCV Weight: 25g
Description: Rim or lid sherd?; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4.5 x 4.5cm; 2.5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30116 Context: 88nw
Stratigraphic Phase: XCV Weight: 80g
Description: Body sherd; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 10.1 x 4.4cm; 2.5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30115 Context: 134nw
Stratigraphic Phase: XCV Weight: 13g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4.6 x 2.7cm; 0.8cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30113 Context: 316ne
Stratigraphic Phase: XCV Weight: 36g
Description: Jar rim sherd; rim and interior bear bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.5 x 3.1cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?
[Fig. 5.2]

Special find no: 30111 Context: 158oe
Stratigraphic Phase: XCV Weight: 20g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.

Dimensions: 6.2 x 3cm; 1.1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30110 Context: 133ne
Stratigraphic Phase: XCV Weight: 105g
Description: Body sherd; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6 x 6cm; 3.5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30108 Context: 316ne
Stratigraphic Phase: XCV Weight: 10g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 3.4 x 2.8cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 30107 Context: 97se
Stratigraphic Phase: XCV Weight: 69g
Description: Two body sherds; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: First: 6.1 x 3cm; 3cm thick; Second: 4 x 3cm; 2.6cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8670 Context: 294ne
Stratigraphic Phase: XCV Weight: 26g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6.4 x 4.6cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?
[Plate 1.1]

Special find no: 8649 Context: 269
Stratigraphic Phase: XCV Weight: 12g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4.4 x 3.2cm; 0.8cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8648 Context: 327ne
Stratigraphic Phase: XCV Weight: 16g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip with incised checker-board decoration.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4.7 x 3.5cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8647 Context: 401sw
Stratigraphic Phase: XCV Weight: 100g
Description: Two body sherds; first: interior bears bitumen coating; exterior bears white slip second: very eroded.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: First: 5.6 x 4.5cm; 1.5cm thick; Second: 7.5 x 7.1cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8646 Context: 320ne
Stratigraphic Phase: XCV Weight: 45g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.

Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.1 x 4.8cm; 1.6cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8644 Context: 123se
Stratigraphic Phase: XCV Weight: 11g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 3.5 x 2.9cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8643 Context: 368
Stratigraphic Phase: XCV Weight: 5g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 2.8 x 2.1cm; 0.6cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8642 Context: 368nw
Stratigraphic Phase: XCV Weight: 62g
Description: Two body sherds; interiors bear bitumen coating; exteriors bear white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: First: 6.5 x 5.4cm; 0.9cm thick; Second: 6.1 x 4.7cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8641 Context: 316ne
Stratigraphic Phase: XCV Weight: 35g
Description: Two body sherds; interiors bear bitumen coating; exteriors bear white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 5.1 x 3.2cm; 1.2cm thick; Second: 4 x 2.5cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8640 Context: 324ne
Stratigraphic Phase: XCV Weight: 49g
Description: Two body sherds; interiors bear bitumen coating; exteriors bear white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: First: 7 x 4.3cm; 0.7cm thick; Second: 4 x 3.1cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8639 Context: 256
Stratigraphic Phase: XCV Weight: 50g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6.7 x 4.5cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8638 Context: 320se
Stratigraphic Phase: XCV Weight: 7g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 3 x 2.5cm; 1.6cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8637 Context: 142se
Stratigraphic Phase: XCV Weight: 42g
Description: Body sherd rounded into a disc; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6.3 x 6.3cm; 0.7cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8633 Context: 401sw
Stratigraphic Phase: XCV Weight: 119g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 13.5 x 6.7cm; 1.4cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8630 Context: 134nw
Stratigraphic Phase: XCV Weight: 64g
Description: Body sherd; very eroded.
Technique: Earthenware, very eroded.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6 x 4.3cm; 1.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8629 Context: 88nw
Stratigraphic Phase: XCV Weight: 5g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 3.7 x 1.1cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8621 Context: 86ne
Stratigraphic Phase: XCV Weight: 21g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 6 x 2.7cm; 0.6cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8620 Context: 158
Stratigraphic Phase: XCV Weight: 68g
Description: Two body sherds forming one piece; interiors bear bitumen coating; exteriors bear white slip. At least four edges worn into a tool or rubber.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: First: 5.1 x 3.3cm; 0.9cm thick; Second: 5.1 x 4.2cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8617 Context: 124nw
Stratigraphic Phase: XCV Weight: 12g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 4.9 x 2.2cm; 1.1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8616 Context: 107nw
Stratigraphic Phase: XCV Weight: 21g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.

Dimensions: 5 x 4.5cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8614 Context: 126se
Stratigraphic Phase: XCV Weight: 40g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 5.7 x 5.1cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8609 Context: 76ne
Stratigraphic Phase: XCV Weight: 13g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 5 x 3cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8607 Context: 78se
Stratigraphic Phase: XCV Weight: 45g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip. Three edges worn into a 'L'-shaped tool of rubber.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.9 x 5cm; 1.5cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8606 Context: 134
Stratigraphic Phase: XCV Weight: 20g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 3.7 x 3.2cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8604 Context: 103aw
Stratigraphic Phase: XCV Weight: 94g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 9.1 x 5.8cm; 1.6cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 8603 Context: 88ne
Stratigraphic Phase: XCV Weight: 4g
Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 1.7 x 1.4cm; 1.8cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

Special find no: 2627 Context: 76nw
Stratigraphic Phase: XCV Weight: 50g
Description: Base sherd of amphora; narrow flaring shaft with flaring base; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 5 x 4.7cm; 1cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?
[Fig. 5.2]

Special find no: 8615 Context: 74sw
Stratigraphic Phase: XCIV Weight: 54g

Description: Body sherd; interior bears bitumen coating; exterior bears white slip.
Technique: Earthenware with thin white slip on exterior and bitumen coating on interior.
Material: Buff earthenware with sand-tempered fabric.
Dimensions: 7.8 x 6cm; 0.9cm thick.
Date: 5th - 9th century Provenance: Iraq or Iran?

5.3 East Asian ceramics

A total of 21 East Asian glazed sherds were recovered from trench ASW2. As indicated in Table 5.3 (The East Asian glazed ceramics), this number is fairly evenly split between Xing and Ding wares and Yue wares, while there are only three examples of Changsha painted stoneware and two examples of coarse grey stoneware. The highest concentration of sherds, 16, has been found in periods C, D & E, whilst a further 5 sherds were recovered from period B. The collection is fairly consistent in date and centres on the ninth to tenth centuries AD in parallel with the West Asian glazed ceramics. The authors are extremely grateful to Rose Kerr, of the Victoria and Albert Museum, for the identification of the East Asian glazed wares.

5.3.1 Changsha painted stoneware

As all the examples of this painted stoneware recovered from ASW2 were body sherds, we are unable to suggest the complete forms. Despite the small size and undiagnostic nature of the forms, they have been identified as late Tang-period wares from the Changsha region of Hunan. The sherds all bear a white slip on the interior and, at least, a partial slip on the exterior. The artefacts sfs 1315 and 2139 both have pigment decoration, the former in brown, the latter in green and brown; but sf 1915 has no decoration whatsoever. Typically the pigments have blurred into the glaze at the edges. A total of three small sherds of this category were recovered, all from period C, D & E. Similar sherds have been recovered from Mantai (Carswell and Prickett 1984: 64), Siraf (Tampoe 1989: 54-6) as well as from the Abhayagiri monastery at Anuradhapura (Guy 1986: 10).

Special find no: 1315 Context: 88ne
Stratigraphic Phase: CXV Weight: 2g
Description: Wall sherd; interior brown stripes with yellowish glaze; exterior brown expanse with yellowish glaze; crackled glaze.
Technique: Pottery; stripes of pigment on white slip under yellowish transparent glaze.
Material: Stoneware.
Dimensions: 2.4 x 1.8cm; 0.4cm thick.
Date: 9th century Provenance: Changsha, S.W. China
[Plate 1.1]

Special find no: 2139 Context: 285ne
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; interior brown and green stripes with yellowish glaze; exterior with partial yellowish glaze; smooth crackled glaze.
Technique: Pottery; stripes of pigment on white slip under yellowish transparent glaze.
Material: Stoneware.
Dimensions: 3.2 x 1.5cm; 0.4cm thick.
Date: 9th century Provenance: Changsha, S.W. China
[Plate 1.1]

Special find no: 1915 Context: 324ne
Stratigraphic Phase: XCV Weight: 3g
Description: Wall sherd; interior and exterior undecorated with yellowish glaze; crackled glaze.

Technique: Pottery; white slip under yellowish transparent glaze.
Material: Stoneware.

5.3.2 Xing and Ding white wares

A noticeable category, they have a fine white porcelain body and a thin, even transparent glaze. They all appear to be North Chinese Xing wares with the possible exception of sf 6069. This sherd, with its ivory white body, may represent an example of an early Ding ware from the same region. It is possible to ascribe a date of between the ninth and tenth centuries AD to both wares. A total of ten very small sherds of this category were recovered from ASW2, three from period B and seven from period C, D & E. It is interesting to note that Ding ware is equally extremely rare at Siraf, where only two sherds were identified (Tampoe 1989: 67).

Special find no: 1325 Context: 9sw
Stratigraphic Phase: CVI Weight: 2g
Description: Wall sherd; white porcelain; glassy, slightly bubbly glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: 2 x 1.5cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China
[Plate 1.1]

Special find no: 349 Context: 41
Stratigraphic Phase: C Weight: 4g
Description: Wall sherd; white porcelain; smooth glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: Width 2.5cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 171 Context: 63nw
Stratigraphic Phase: XCVI Weight: 4g
Description: Wall sherd; white porcelain, smooth glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: Width 2cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 6222 Context: 313sw
Stratigraphic Phase: XCV Weight: 0.1g
Description: Small wall sherd; white porcelain; smooth glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: Width 0.5cm; 0.2cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 6069 Context: 296ne
Stratigraphic Phase: XCV Weight: 11g
Description: Body sherd; white porcelain; fine, smooth glaze; outer side bears spur mark; inner side has horizontal coils mouldings.
Technique: Ivory white porcelain with transparent glaze.
Material: Ivory white porcelain.
Dimensions: 4.8 x 3.6cm; 0.5cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 2631 Context: 292ne
Stratigraphic Phase: XCV Weight: 4g
Description: Thick wall sherd; white porcelain; smooth, cracked glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: 2 x 1.5cm; 0.8cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 2244 Context: 78se
Stratigraphic Phase: XCV Weight: 2g
Description: Tapered rim sherd; smooth glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.

Dimensions: 2.2 x 1.5cm; 0.7cm thick.
Date: 9th century Provenance: Changsha, S.W. China
Dimensions: 3 x 1.5cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China
[Fig. 5.2]

Special find no: 1166 Context: 92sw
Stratigraphic Phase: XCV Weight: 3g
Description: Three wall sherds; white porcelain; smooth glaze on each side with horizontal incisions.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: Each width 1cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 773 Context: 56
Stratigraphic Phase: XCV Weight: 1g
Description: Thin tapered rim sherd; white porcelain; smooth glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: 2 x 1.5cm; 0.2cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 717 Context: 182se
Stratigraphic Phase: XCV Weight: 2g
Description: Small body sherd; white porcelain; smooth transparent glaze.
Technique: White porcelain with transparent glaze.
Material: White porcelain.
Dimensions: 1.7 x 1.5cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China

Special find no: 2272 Context: 158nw
Stratigraphic Phase: XCV Weight: 6g
Description: Body sherd; white porcelain; smooth transparent glaze; some iron discoloration.
Technique: White porcelain with transparent glaze.
Material: White porcelain
Dimensions: 2.6 x 1.8cm; 0.6cm thick.
Date: 9th - 10th century Provenance: Hebei, N. China
[Plate 1.1]

5.3.3 Yue green ware

A further group is represented by the green wares. They all have a uniformly fine mid-grey stoneware body and a very thin, even, olive glaze. The sherds are also rather small, and so it is difficult to gauge vessel types. They represent typical Yue green wares from the kilns of Zhejiang province in S.E. China and can be dated to between the ninth and tenth centuries AD. A total of six small sherds of this category were recovered from ASW2: one from period B and five from period C, D & E. Sherds of this ware have also been recovered from Siraf (Tampoe 1989: 51-4), Mantai and Polonnaruwa, as well as from the Abhayagiri and Jetavana monasteries in Anuradhapura (Prickett 1990: 83).

Special find no: 75 Context: 27se
Stratigraphic Phase: C Weight: 4g
Description: Tapered, everted rim sherd; grey body; glazed.
Technique: Stoneware with olive green glaze.
Material: Fine grey stoneware.
Dimensions: 3 x 3cm; 0.3cm thick.
Date: 9th - 10th century Provenance: Zhejiang, S.E. China
[Fig. 5.2]

Special find no: 5255 Context: 296
Stratigraphic Phase: XCV Weight: 0.94g
Description: Body sherd; grey body; fine cracked glaze.
Technique: Stoneware with olive green glaze.
Material: Fine grey stoneware.
Dimensions: 1.5 x 1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Zhejiang, S.E. China

Special find no: 2673 Context: 292ne
Stratigraphic Phase: XCV Weight: 2g
Description: Irregularly shaped sherd, possibly handle; part glazed; grey body.
Technique: Stoneware with olive green glaze.
Material: Fine grey stoneware.
Dimensions: Width 1.5cm.
Date: 9th - 10th century Provenance: Zhejiang, S.E. China

Special find no: 1915 Context: 324ne
Stratigraphic Phase: XCV Weight: 3g
Description: Body sherd; grey body; finely cracked glaze.
Technique: Stoneware with olive green glaze.
Material: Fine grey stoneware.
Dimensions: 2 x 1.5cm; 0.7cm thick.
Date: 9th - 10th century Provenance: Zhejiang, S.E. China

Special find no: 1885 Context: 332se
Stratigraphic Phase: XCV Weight: 5g
Description: Body sherd; grey body; fine glazed.
Technique: Stoneware with olive green glaze.
Material: Fine grey stoneware.
Dimensions: 3.5 x 2cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Zhejiang, S.E. China
[Plate 1.2]

Special find no: 346 Context: 87sw
Stratigraphic Phase: XCV Weight: 4g
Description: Body sherd; grey body; glazed.
Technique: Stoneware with olive green glaze.
Material: Fine grey stoneware.
Dimensions: 4.1 x 2.1cm; 0.4cm thick.
Date: 9th - 10th century Provenance: Zhejiang, S.E. China
[Plate 1.2]

5.3.4 Coarse grey stoneware

This is a very small group in the collection with only two sherds, a base and a rim. They are both coarse stonewares bearing an olive-green glaze. As the glaze is hard and adheres well to the highly fired stoneware body, we may suggest that these two examples are either Chinese or North Vietnamese, but they cannot be more accurately dated than to between the eighth and twelfth centuries AD. Both sherds appear to belong to storage jar forms or *martavans*. They are perhaps 'Dusun' stonewares, although the vagaries of this definition can be found in Harrison's statement that "the term has locally been used for big jars, but the ware comes in all sizes and a moderate range of shapes" (Harrison 1965: 69). A total of two sherds of this category were recovered from ASW2 – one from period B and one from period C, D & E. Sherds of 'Dusun' type olive-green glazed grey stonewares have also been recovered from Mantai (Carswell and Prickett 1984: 64), as well as from Siraf in the Gulf and Banbhore on the Pakistan coast (Whitehouse 1968: 18; Tampoe 1989: 47).

Special find no: 182 Context: 41
Stratigraphic Phase: C Weight: 45g
Description: Jar rim sherd, slightly everted; grey body; glazed both sides.
Technique: Stoneware with olive green glaze.
Material: Coarse grey stoneware.
Dimensions: 6.6 x 4.5cm; 1cm thick.
Date: 8th - 12th century Provenance: China or N. Vietnam
[Plate 1.2; Fig. 5.2]

Special find no: 1744 Context: 320ne
Stratigraphic Phase: XCV Weight: 13g
Description: Flat base sherd; grey body; partial glazing on exterior.
Technique: Stoneware with olive green glaze.

Material: Coarse grey stoneware.
Dimensions: 4.1 x 2.6cm; 0.5cm thick.
Date: 8th - 12th century Provenance: China or N. Vietnam
[Fig. 5.2]

5.4 European ceramics

The European glazed ceramics represent the smallest category of the collection, with only two examples from period A (see Table 5.4). Sherds of white bone china, they are clearly datable to the twentieth century and are most probably imports from the United Kingdom.

Special find no: 801 Context: 4sw
Stratigraphic Phase: CXIV Weight: 23g
Description: Rim and wall sherd of dish; smooth, cracked glaze; blue stripes.
Technique: White bone china with transparent glaze.
Material: White bone china.
Dimensions: 7.5 x 5.5cm.
Date: Modern Provenance: UK

Special find no: 802 Context: 4sw
Stratigraphic Phase: CXIV Weight: 13g
Description: Dish sherd (rim and wall); white glaze, blue stripes. Identical to 801.
Technique: White bone china with transparent glaze.
Material: White bone china.
Dimensions: 6 x 4cm.
Date: Modern Provenance: UK

5.5 Locally manufactured glazed ceramic tiles

There is a single category of locally manufactured glazed ceramics from trench ASW2: glazed tiles (see Table 5.5). They all consist of local coarse earthenware tiles coated with an uneven coloured glaze. Ten sherds were recovered, eight from period C, D & E and two from period A, the latter being clearly of an intrusive nature.

The glazed earthenware tiles from ASW2 are by no means an unknown phenomenon at the Citadel of Anuradhapura. Parānavitana encountered turquoise, white, yellow and red glazed tiles in addition to glaze lumps whilst excavating both Building B and the Mahapali (1936: 4, 33). One of the more interesting questions associated with their discovery is their possible origin – import or local. In an attempt to answer this question, Parānavitana had a chemical analysis of tile glaze and glaze lumps from the former site conducted. The results suggested that both were of a similar local source although it was also stated that "It is quite conceivable that the art (the manufacture of glazes) was originally learnt from some foreign traders" (ibid.). Numerous glazed roof tiles have also been recovered from the Abhayagiri Vihara complex at Anuradhapura (Hocart 1924: 3; Wickramagamage 1984: 41; Wickramagamage *et al.* 1984: 364). The coloured glazes include light yellow, white, dark red, green and turquoise (Wickramagamage 1984: 41; Wickramagamage *et al.* 1984: 364). The excavators noted that numerous tiny pieces of glaze and misfired glazed tiles were recovered from an area west of the Bodhighara, suggesting that glazing activities had probably occurred there (ibid.: 347, 364). Recent chemical analysis carried out on glazed tiles from the Abhayagiri has suggested that, unlike the results of the earlier analysis, the glaze was imported but that the tile was made locally (Abeyaratne and Wickremasinghe

1990: 4). Indeed, due to similarities between its chemical composition and that of Tang glazes, it has even been suggested that the glaze was imported from China during the Tang period (AD 618–906) (ibid.: 6). It is also interesting to note that a single example of a glazed wall tile was also recovered from the Abhayagiri Vihara at Anuradhapura (Wijeyapala and Prickett 1986: 20). It has been identified as a later lustre ware tile with a white frit body, with an opaque white glaze over-painted with a brown metallic lustre painting and then a clear glaze (ibid.). In addition to finds of glazed tiles at Anuradhapura, examples have also been found at Kantarodai (Pieris 1922: 22). It is generally agreed that glazed tiles were introduced between AD 100 and 300 (Deraniyagala 1992: 713, 724) and went out of use by the Late Anuradhapura period (Wickramagamage *et al.* 1984: 364).

Special find no: 5226 Context: 4sw
Stratigraphic Phase: CXIV Weight: 56g
Description: Incomplete roof tile; upper surface with horizontal ridge and turquoise glaze.
Technique: Coarse earthenware with coloured glaze.
Material: Coarse red earthenware.
Dimensions: 7.2 x 6cm; 1.4cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 642 Context: 79se
Stratigraphic Phase: CXVII Weight: 14g
Description: Incomplete roof tile; upper surface with horizontal ridge and turquoise glaze (some large bubbles).
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 3.8 x 2.1cm; 1.3cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 30100 Context: 107sw
Stratigraphic Phase: XCV Weight: 60g
Description: Incomplete roof tile; upper surface with horizontal ridge and turquoise glaze (some small bubbles).
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 7.2 x 4.1cm; 1.5cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 8595 Context: 256
Stratigraphic Phase: XCV Weight: 29g
Description: Incomplete roof tile; upper surface with turquoise glaze (some small bubbles).
Technique: Coarse earthenware with coloured glaze.
Material: Coarse red earthenware.
Dimensions: 4.5 x 4cm; 1.7cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 8215 Context: 134ne
Stratigraphic Phase: XCV Weight: 35g
Description: Incomplete roof tile; upper surface with horizontal ridge and turquoise glaze (some small bubbles).
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 5.2 x 3.3cm; 1.6cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 2529 Context: 344nw
Stratigraphic Phase: XCV Weight: 14g
Description: Incomplete roof tile; upper surface with horizontal ridge and dark red glaze (some large bubbles).
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 3.9 x 2.6cm; 1.5cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 1483 Context: 103nw
Stratigraphic Phase: XCV Weight: 8g

Description: Incomplete roof tile; upper surface with horizontal ridge and pale turquoise glaze.
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 2.9 x 2.1cm; 1.5cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 1354 Context: 80sw
Stratigraphic Phase: XCV Weight: 15g
Description: Incomplete roof tile; edge of tile bears blue glaze (up to 0.2cm thick).
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 3.5 x 2.5cm; 1.2cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 423 Context: 76ne
Stratigraphic Phase: XCV Weight: 7g
Description: Incomplete roof tile; edge of tile bears turquoise glaze.
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 3.2 x 1.5cm; 1.3cm thick.
Date: 75th - 11th century Provenance: Local

Special find no: 407 Context: 76
Stratigraphic Phase: XCV Weight: 8g
Description: Incomplete roof tile; upper surface with horizontal ridge and turquoise glaze.
Technique: Coarse earthenware with coloured glaze.
Material: Coarse orange-red earthenware.
Dimensions: 2.8 x 2cm; 1.1cm thick.
Date: 75th - 11th century Provenance: Local

5.6 Dating the glazed ceramics

The glazed sherds from ASW2 are of clear assistance in establishing a clear chronology for the later part of the sequence, and the following section will attempt to assess the dating evidence from the above 12 categories. The dating and provenancing of early Islamic pottery is not always very accurate or reliable. Recently Rogers (1994: 37) assessed the overall situation as follows:

The stylistic groups of pottery which fill our museums, identified by toponyms often fifty years old which are widely agreed to be fictitious, are still unchallenged. Conversely, the charting of kiln-sites and pottery sequences with suitably fine chronological sequences is rudimentary.

Among the West Asian glazed pottery types present at Anuradhapura, the most satisfactorily dated are the lustre wares. There are a number of reasons for this. From an aesthetic point of view, they have been perceived as some of the most appealing works of early Islamic potters; they are well represented in museum and private collections, and have attracted a high degree of art-historical interest. Stylistic trends in early lustre ware have been quite thoroughly studied, and it has also been conspicuous in some important archaeological sequences.

Islamic lustre ware is in fact inherently rewarding to close study. Amongst all the products of early Islamic potters, lustre ware was the most technically and artistically accomplished. Unlike the common and abundant 'Sasanian-Islamic' wares, which were relatively cheap everyday objects, widely produced in the Iranian world, the production of lustre wares must have been restricted. There is widespread agreement among scholars that the manufacture of lustre ware was a

difficult and highly accomplished skill, probably restricted to a circle of elite craftsmen who maintained some sort of monopoly on the technique of manufacture. Caiger-Smith is an especially powerful exponent of this theory, being both an art historian and a practising potter (1985). Hence, scholars in the field tend to maintain that known varieties of lustre ware can be attributed to a restricted set of schools; and by stylistic analysis, hopefully backed up with some archaeological evidence, a clear line of development can be traced in the history of its production.

The lustre-ware sherds from ASW2 clearly seem to come from the Abbasid group. Some of the distinguishing stylistic features of Abbasid lustre painting include a background of dots, circles and small stripes (Ettinghausen and Grabar 1994: 114). These features are apparent on the examples catalogued in section 5.2.1 above. Abbasid lustre wares also typically have a smooth yellow earthenware body, as do all of these. A number of the sherds also bear lustre designs in polychrome, as opposed to a more or less monochrome palette. Polychrome lustre is generally held to be unique to the Abbasid group and indeed some scholars, such as Caiger-Smith, have maintained that the polychrome style represents an early phase of Abbasid lustre painting (Caiger-Smith 1985: 31). Although fragments of Abbasid lustre ware are found all over the Islamic world, the source of their manufacture is generally attributed to Iraq. Finds at major sites in Iraq, such as Samarra and Basra, are numerous. Susa, in western Iran, also has its supporters as a possible centre of production. However, confirmed findings of kilns where lustre ware was produced are fairly elusive. The largest quantities of early lustre ware have been brought to light at Samarra, the capital of the Abbasid empire for much of the ninth century AD (836–92) (Allan 1971: 13).

Abbasid lustre ware and its imitations are generally agreed to date from the ninth, and possibly the tenth, century. The beginnings of Abbasid white tin-glazed pottery in general are often thought to follow on from the importation of Chinese white ceramics into the Islamic world (Philon 1980: 64; Allan 1971: 8–9). This acquaintance with Tang white wares, and consequent imitation of them, seems to have happened in the ninth century AD (Allan 1971: 8). There are a few fixed points of reference for dating Abbasid lustre wares. Lustre tiles were found at three Abbasid palaces in Samarra, the earliest of which seems to be the Jawsaq al-Khaqani, probably built during the reign of Mutasim (AD 833–42). A more definite date is provided by the set of tiles set into the *mihrab* of the Great Mosque of Kairouan in Tunisia, which are datable to the year AD 862–3; according to the generally held view, these were made in Iraq (ibid.: 13). There is no clear evidence that this school of lustre ware continued production into the tenth century, but it seems a reasonable possibility, especially given the apparent (if debatable) continuity of lustre ware styles from Abbasid Iraq to early Fatimid Egypt. As indicated by Table 5.2, 28 of the 34 sherds of this ware recovered from ASW2 came from the fills of robber pitting phases C, D & E. While most of the finds of lustre ware from ASW2 were recovered from redeposited contexts, like the fills of robber pits or old land surfaces

and foundations, sf 148 was recovered from the fill of foundation slot 230, which was constructed during stratigraphic phase XCVI of structural phase B1.

Abbasid lustre ware is much better known than most forms of early Islamic pottery, yet it should be apparent from the above discussion that the guidelines for assessing its chronology and provenance are still rather vague. Common wares of low technical accomplishment and artistic quality, such as the alkaline turquoise-glazed earthenwares of the 'Sasanian-Islamic' group, defy close dating. The latter group represents a markedly lower level of pottery manufacture, widely produced, and maintaining a continuity of basic features from Parthian to early Islamic periods (Ettinghausen 1939; Whitehouse 1968: 14). Certainly the discovery of such sherds at Sirkap, Taxila, confirms that they were present in South Asia as early as the first quarter of the first millennium AD (Marshall 1951: 406–408). At ASW2 three sherds were recovered from contexts within structural phase B5, sfs 1331 and 1330 from within the fill of posthole 71, whilst sf 892 was recovered from the fill of posthole 69. Special find 104 came from the fill of phase B3 pit 109, while sf 281 was recovered from a B1 ash deposit and sf 885 from the fill of slot 230 in the same phase. Only two of the possible Parthian sherds were recovered from features: both sf 8590 and sf 2378 were found within the debris collapse of the structure of phase G5. This early presence of blue-glazed wares is paralleled at Siraf, where such sherds were found in period I, which is dated to the first half of the first millennium AD (Tampoe 1989: 77–82).

The lead-glazed earthenwares found at Anuradhapura are also difficult to classify accurately. Monochrome lead-glazed wares can date from pre-Islamic times in the Middle East (Allan 1991: 10). However, it seems that the beginnings of using polychrome lead glazes (glazes with splashed green and brown colouring) on vessels can be discerned from the eighth century AD, according to the findings of the American Research Institute in Cairo (ibid.). Some of the lead-glazed sherds from ASW2 show polychrome decoration. At the other end of the time-scale, simple lead-glazed wares remained common in the Middle East throughout the mediaeval period. Examples from this group were found in levels dating to between the ninth and tenth centuries AD at Kilwa on the East African coast (Chittick 1974: 303). A date of between the ninth and twelfth centuries AD has therefore been ascribed to this category. As with the other West Asian ceramics, the majority of lead-glazed wares were recovered from secondary contexts at ASW2. However, sf 1176 was recovered from the fill of structural phase B3 pit 94 and sf 159 from the fill of structural period B1's slot 234.

The remaining group of ASW2's Islamic pottery types that can be discussed is that of the non-lustred, white, tin-glazed wares. This is a relatively distinctive group, related in technique and vessel type to the lustre wares. Both types employ the white tin glaze and the relatively smooth yellow earthenware body. A common vessel type for both was the conical bowl: a vessel type that may perhaps be discerned from the Anuradhapura sherds. This type of pottery is again generally attributed to Iraq, and possibly Iran. Its origins are also thought to

be linked with the import of Chinese white wares and high fired porcelains into Iraq in the ninth century (Allan 1971: 8). A large proportion of them bear some splashed green colouring or blue in-glaze colouring (ibid.: 10). It is thus significant that a couple of the ASW2 sherds also display this feature. The dates of Abbasid white wares are often the ninth and tenth centuries. In the important excavations at Siraf on the Persian Gulf conducted by Whitehouse, these white wares were found in contexts attributed to the ninth–eleventh century AD (Whitehouse 1968: 15, 21; 1969: 60; 1971: 4; Tampoe 1989: 72–3). Similar dates are reported by Chittick for the finds of this group in Kilwa's period Ia (Chittick 1974: 302). Most of the finds of this ware from ASW2 come from the fills of robber pits, foundations and old land surfaces, where they are probably of a mixed nature. A number however were recovered from sealed features. Sf 94 was recovered from a pit cut during stratigraphic phase CIII of structural phase B3, and a further three sherds were recovered from structural phase B1; sf 2262 was recovered from the fill of B1 slot 242, sf 889 from the fill of B1 slot 230, and sf 2254 from the fill of B1 pit 148. A further sherd, sf 1587, was recovered from the fill 42 of robber pit 275. As this fill also contained structural period C wall 263, it allows us to suggest that the structure from which the wall came was probably destroyed by the ninth to tenth centuries AD. Buff ware, as stated above, has been identified as a Sasanian-Early Islamic category and broadly dated to between the fifth and ninth centuries AD by Wijeyapala and Prickett (1986: 17). The majority of sherds of this ware were recovered from very mixed fills and only two were recovered from smaller features. Sf 8608 was recovered from the fill of phase B3 pit 94 and sf 8613 from the fill of phase B1 slot 242.

The East Asian ceramics, by comparison, appear to be rather better dated and provenanced. In most cases it is even possible to identify the provinces in which they were manufactured. Undoubtedly this is due to the research work carried out on kiln sites within the People's Republic of China. This is best epitomized by the publication *Kiln Sites of Ancient China* (Hughes-Stanton and Kerr 1981), which studied kiln sites and discarded sherds in their vicinity. The presence of Changsha painted stonewares at Anuradhapura generally illustrates the increased international trading from China following its unification under the Tang dynasty (c. AD 618–906) (Guy 1986: 6). Produced in Changsha in southwest China and traded from ports of southern Zhejiang and Guangzhou, this ceramic ware is also found at Nishapur in Iran and Manda in Kenya (ibid.). The identification of ninth–tenth-century Ding and Xing wares from Hebei province in northern China suggests that, although Guy favours their export via the overland silk route (ibid.: 70), some were undoubtedly being shipped on the southern, maritime routes as well. Of similar date are the Yue greenwares from Zhejiang in southeastern China. However, they are useful for dating as they were replaced by Longquan greenwares by the middle of the tenth century AD (ibid.). Only one of the 22 East Asian sherds came from a structural feature: sf 171, a Xing ware sherd, was recovered from the fill of B1 slot 238. It has been attributed to between the ninth

and tenth centuries AD. The building of structural phase B1 is therefore of great interest, having in its wall slots and rubbish pits sherds of Xing ware, 'Sasanian-Islamic' blue glazed ware, buff ware, Islamic tin-glazed white ware and lead-glazed ware. It appears that the pillared hall was robbed of building material during the early part of the ninth century and the tenth century, and that the locality itself was then reoccupied shortly afterwards when the squatter occupation of structural period B began.

5.7 Conclusion

The eleventh century AD forms an important watershed in the history of Anuradhapura, as the city was sacked by the Cholas in AD 1017 and, according to historical tradition, abandoned as a royal capital (Codrington 1939; De Silva 1981). It is of interest therefore to establish whether the archaeological sequence from ASW2 supports this view of Anuradhapura's demise. Leaving aside other forms of evidence, the glazed sherds have some relevance to this question. The more distinctive and accomplished types of West Asian glazed ceramics seem to date from the ninth to tenth centuries AD (lustre ware, tin-bodied white glazed wares and lead-glazed wares), while important luxury types of later Islamic pottery, sgraffiato and frit-bodied wares for example, appear to be conspicuous by their absence. This pattern is paralleled by the East Asian ceramics. The ninth to tenth century AD diagnostic wares (Changsha, Xing, Ding and Yue) are present, but later wares, Longquan greenwares for example, are absent. This might seem to amount to some sort of *prima facie* evidence in support of the catastrophic view of the Chola conquest: that Anuradhapura, effectively, may have abandoned involvement in luxury trade after this period and generally ceased to be a major urban centre. A similar pattern is found at Mantai, where a single sherd of late sgraffiato dating to the mid-eleventh century AD was recovered (Carswell and Prickett 1984: 55). This pattern is generally found island-wide and Prickett states "During the eleventh to thirteenth centuries, the Sri Lankan sites contain almost no contemporary Near Eastern pottery" (1990: 71). Polonnaruwa, the successor capital to Anuradhapura, also mirrors the decline of trade with the Islamic world, and Mikami notes that the East Asian ceramics at the site were mainly of the Sung (Song) dynasty (AD 960–1279) and that there were none after that date (in Prematilleke 1985: 81). This collapse in Islamic, and to a lesser extent Chinese, trade may be partly a reflection of the shift in maritime trade from the Gulf to the Red Sea with the move of the Caliphate to Egypt (Tampoe 1989: 112) or it may be the result of the shift of major trade routes to Chola ports in South India, such as Nagapattanam (ibid.: 109). Certainly with the advent of Chola sovereignty over Sri Lanka it is to be expected that any excess surplus available for trading would have been redirected to the mainland.

The presence of West Asian glazed ceramics, especially the luxury types, and indeed of Chinese wares would seem to demonstrate that Anuradhapura, in its later heyday, had a significant role to play in the Indian Ocean economy. For useful summaries of possible

imports and exports see Tampoe (1989) and Prickett (1990). The West Asian pottery types found at the site seem to correlate well with what has been found at a number of other significant urban sites in the Western Indian Ocean, although it is interesting to note that, while Siraf had 1 East Asian sherd to every 10 West Asian sherds (Tampoe 1989: 47, 31), ASW2 yielded 1 for every 20. A particularly close and useful comparison may be made with Mantai, a major port on the north-west coast of Sri Lanka. The site has a wide variety of Tang and Song ceramics and West Asian ceramics, in the form of 'Sasanian-Islamic' alkaline glazed wares, and Abbasid tin-glazed wares (including lustre wares) (Carswell and Prickett 1984: 52–8). The general absence of later Islamic fine pottery also prompted the excavators to suggest that the Chola invasion caused instability and economic decline (*ibid.*: 60).

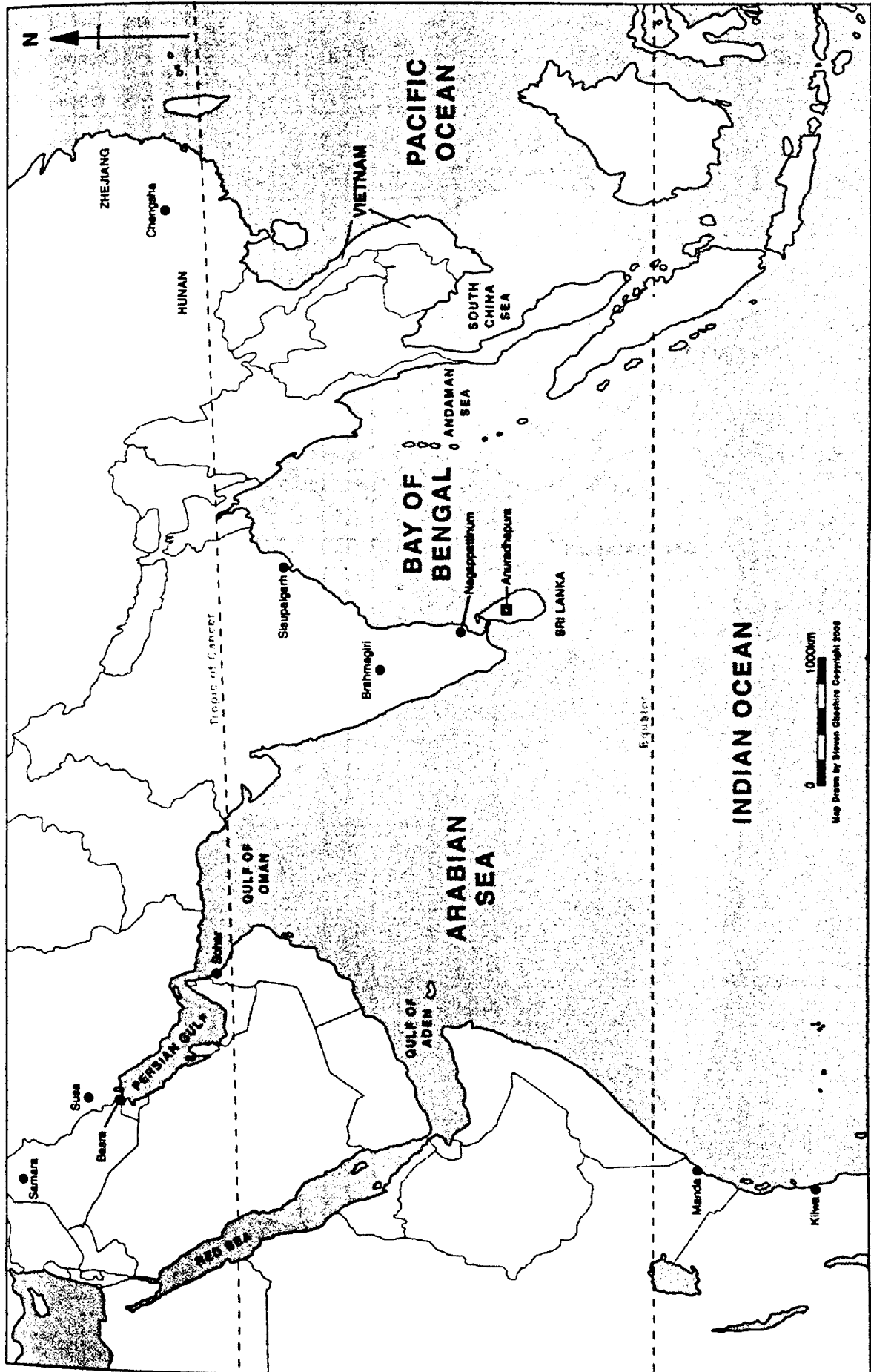
The number and quality of imported early mediaeval glazed ceramics led the excavators to identify Mantai as an important midway stage in the trade between the Islamic and the Chinese worlds: in Prickett's words, "a pivotal entrepot and transshipment centre in the maritime commercial networks of the early medieval period" (*ibid.*: 61). Prickett went on to state (*ibid.*):

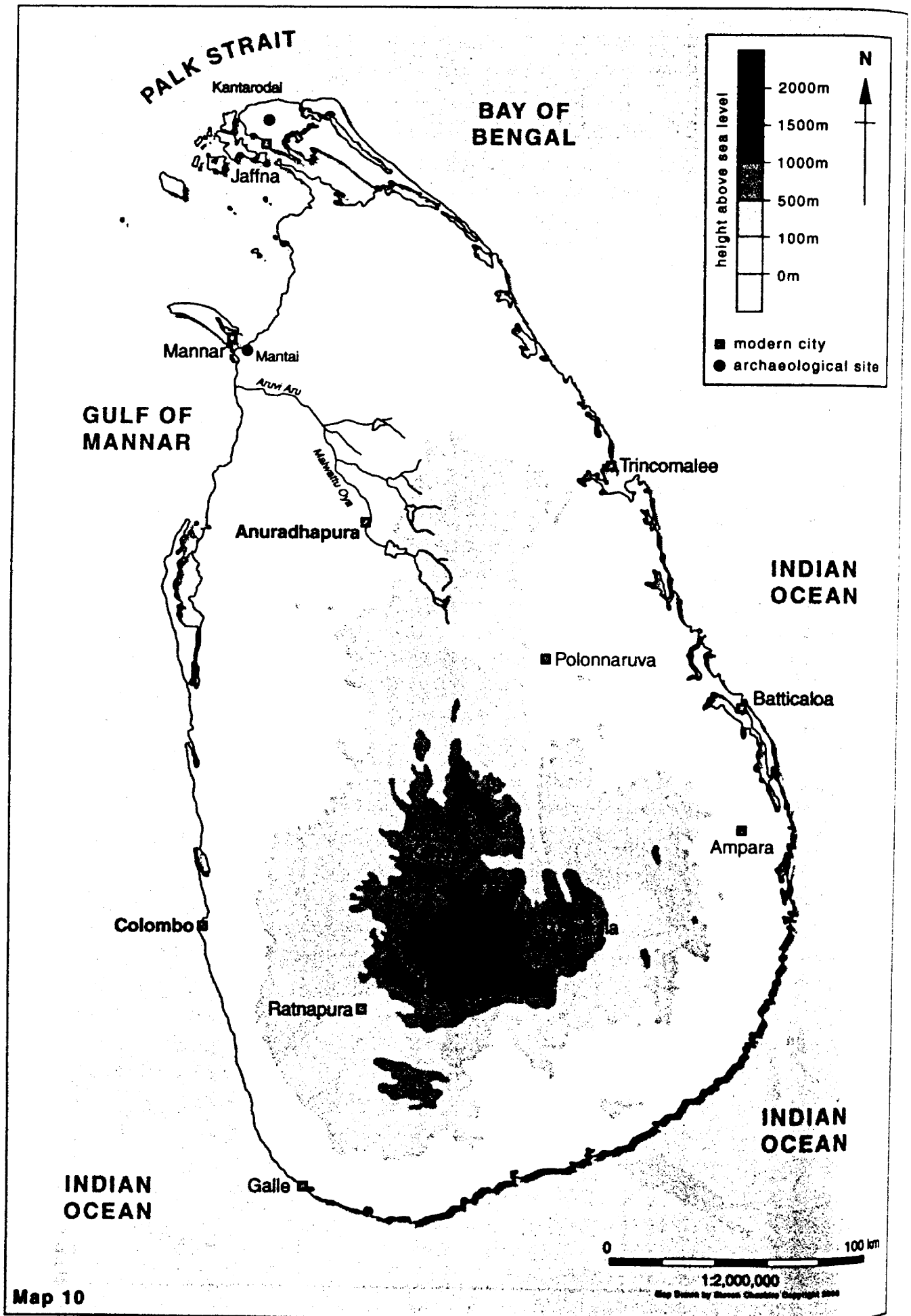
... the imported ceramic material has extremely close parallels with that which has been found at the other western maritime entrepôts of the China trade thriving in the 8th to the 11th centuries AD – Siraf and Basra on the Persian Gulf coast, Sohar on the Omani coast, Banbhore (Daibul) in Sind, Manda and Kilwa on the East African coast.

Similarities in the glazed ceramic assemblages between Anuradhapura and Mantai also demonstrate that, as well as being an Indian Ocean commercial centre in its own right, the latter site should not be overlooked as Anuradhapura's main port – bearing a relationship to the Sinhalese capital not dissimilar to that between Ostia and ancient Rome. The position of Anuradhapura as a temporal capital, as a repository of the Buddha's tooth, collar bone and alms bowl and as a manufacturing centre

for ivory, bone, semi-precious stone and glass objects undoubtedly strengthened the role of Mantai as a port. Trade and exchange, pilgrimage and courtly gifts clearly all played an important role. An example of the latter may be represented by a tenth-century Chinese *ying ch'ing* porcelain box for holding seal-vermilion which was found in the excavations at the Daladage in the Citadel (Paranavitana 1936: 21). Mantai is one of the closest points on the sea to Anuradhapura, and there is a semi-navigable river route between the two on the Malwattu oya. It is also interesting to note that this was the route taken by Robert Knox in the 1680s whilst escaping from Anuradhapura to the Dutch fort at Mannar (Knox 1911).

The evidence of East and West Asian glazed ceramics at Anuradhapura and Mantai cannot reveal more about the commercial activities of either place in the mediaeval period than has already been summarized by Tampoe (1989) and Prickett (1990). However, there are other forms of evidence which help support the view that these commercial links with the Middle East were already present in the centuries leading up to the Islamic period. In an article entitled 'Sasanian maritime trade', Whitehouse and Williamson (1973) sought to prove that there was a colony of Sasanian merchants active at Mantai. A granite pillar inscribed with a 'Nestorian' cross – "a floreate type standing on a stepped pedestal from which emanate two ponds on either side of the cross like horns" – was also found during Ayrton's excavations in the north-eastern sector of the Citadel of Anuradhapura, which suggests that there might have been a similar community there (Hocart 1924: 51). Certainly, written evidence for Middle Eastern merchants and clerics being generally active as far to the east as China is abundant in the early Islamic period (Chaudhuri 1985: 49–50; Whitehouse 1968: 2–3; Whitehouse and Williamson 1973: 43). In conclusion it may be suggested that the trade established between Anuradhapura and the West and East Indian ocean in the late centuries BC reached its zenith in the ninth and tenth centuries AD, and continued until the site was abandoned as a capital in the eleventh century AD.





Map 10

Table 5.1 Glazed ceramics

Category	Period	A	B	C, D & E	F	G	H	I	J	K	Total
West Asian	number	14	81	203	4	4					306
	weight (g)	488	875.76	2422.53	36	8.4					3830.79
East Asian	number		8	13							21
	weight (g)		67	57.04							124.04
European	number	2									2
	weight (g)	36									36
Local tiles	number	2		8							10
	weight (g)	70		176							246
Total	number	18	89	224	4	4					339
	weight (g)	594	942.76	2655.57	36	8.4					4236.73

Table 5.2 West Asian glazed ceramics

Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Lustre ware	number		6	27							33
	weight (g)		27	56.4							83.4
Imitation lustre ware	number		1								1
	weight (g)		1								1
White tin glaze	number	1	25	52							78
	weight (g)	9	199.3	320.8							529.1
Lead glaze	number	1	4	6							11
	weight (g)	28	38	96.53							162.53
Sasanian Islamic	number	3	29	76	4	4					116
	weight (g)	37	226.56	465.5	36	8.4					773.46
Undiagnostic	number	1	1	6							8
	weight (g)	4	10	35.3							49.3
Buff ware	number	8	15	36							59
	weight (g)	410	374	1448							2232
Total	number	14	81	203	4	4					306
	weight (g)	488	875.86	2422.53	36	8.4					3830.79

Table 5.3 East Asian glazed ceramics

Category	Period	A	B	C, D & E	F	G	H	I	J	K	Total
Changsha painted stoneware	number		3								3
	weight (g)		8								8
Xing and Ding white wares	number		3	7							10
	weight (g)		10	29.1							39.1
Yue green ware	number		1	5							6
	weight (g)		4	14.94							18.94
Coarse grey stoneware	number		1	1							2
	weight (g)		45	13							58
Total	number		8	13							21
	weight (g)		67	67.04							124.04

Table 5.4 European glazed ceramics

Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Bone China	number	2									2
	weight (g)	36									36
Total	number	2									2
	weight (g)	36									36

Table 5.5 Locally manufactured glazed tiles

Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Glazed tiles	number	2		8							10
	weight (g)	70		176							246
Total	number	2		8							10
	weight (g)	70		176							246

Glazed Ceramics

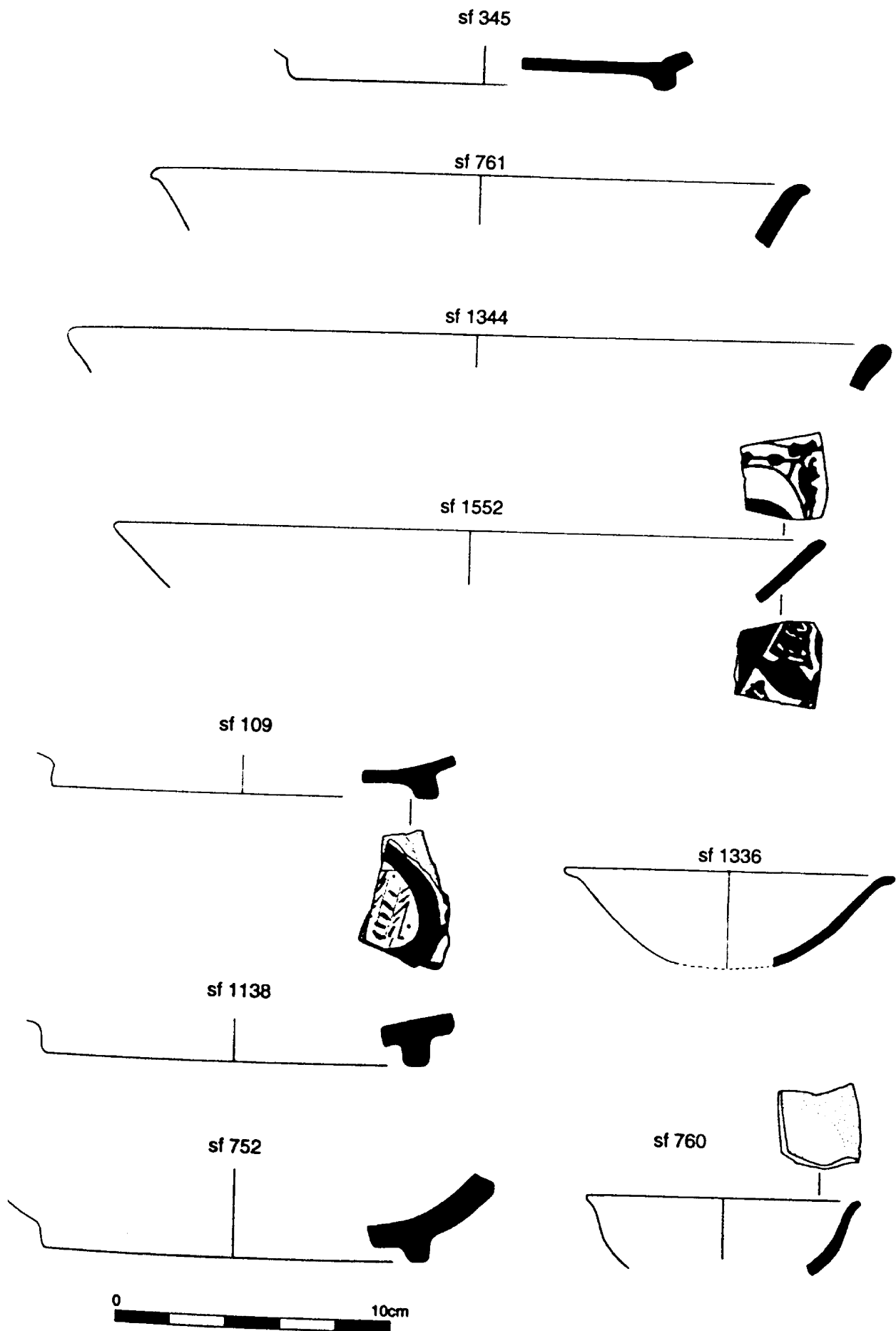


Figure 5.1 Glazed Ceramics

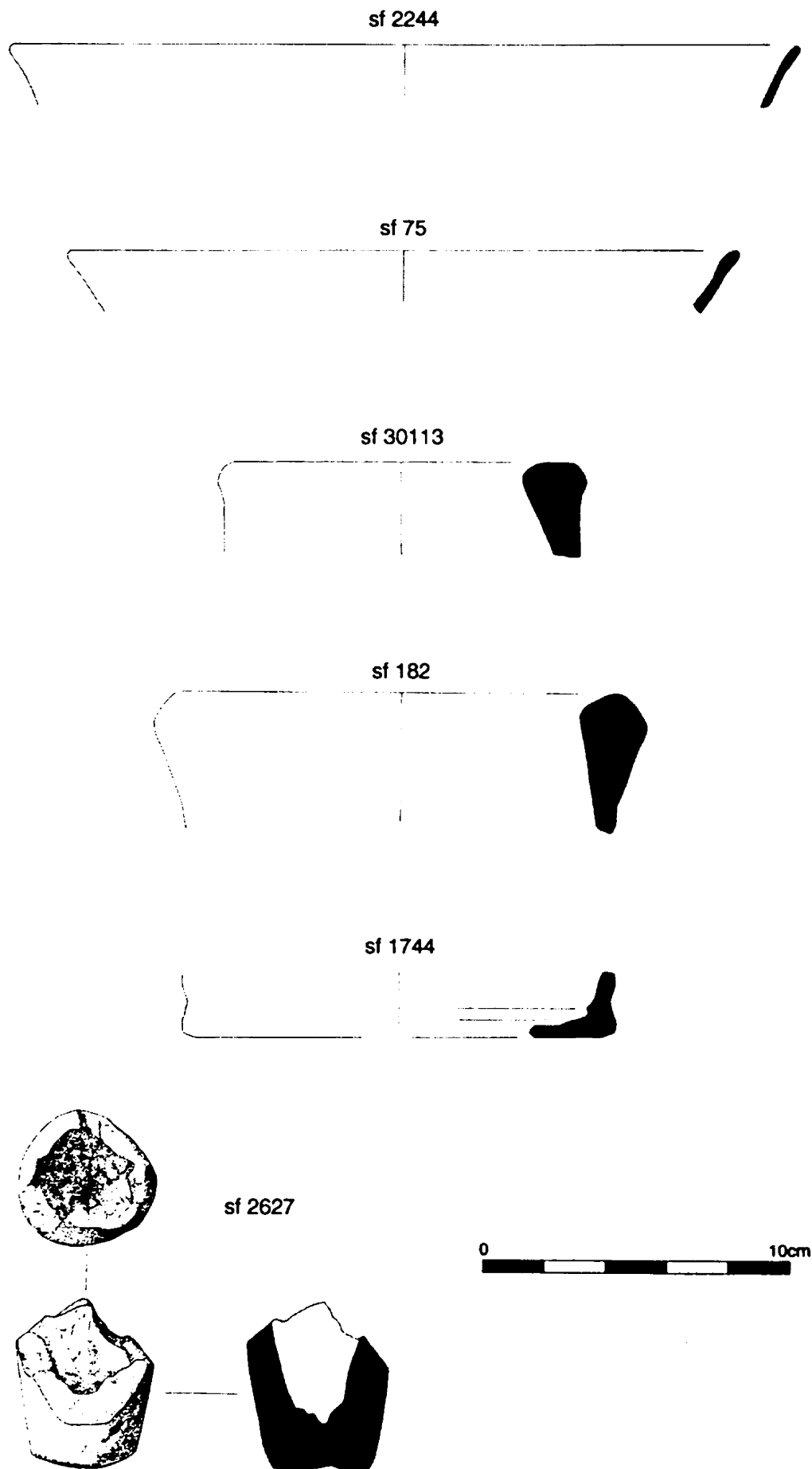


Figure 5.2 Glazed Ceramics