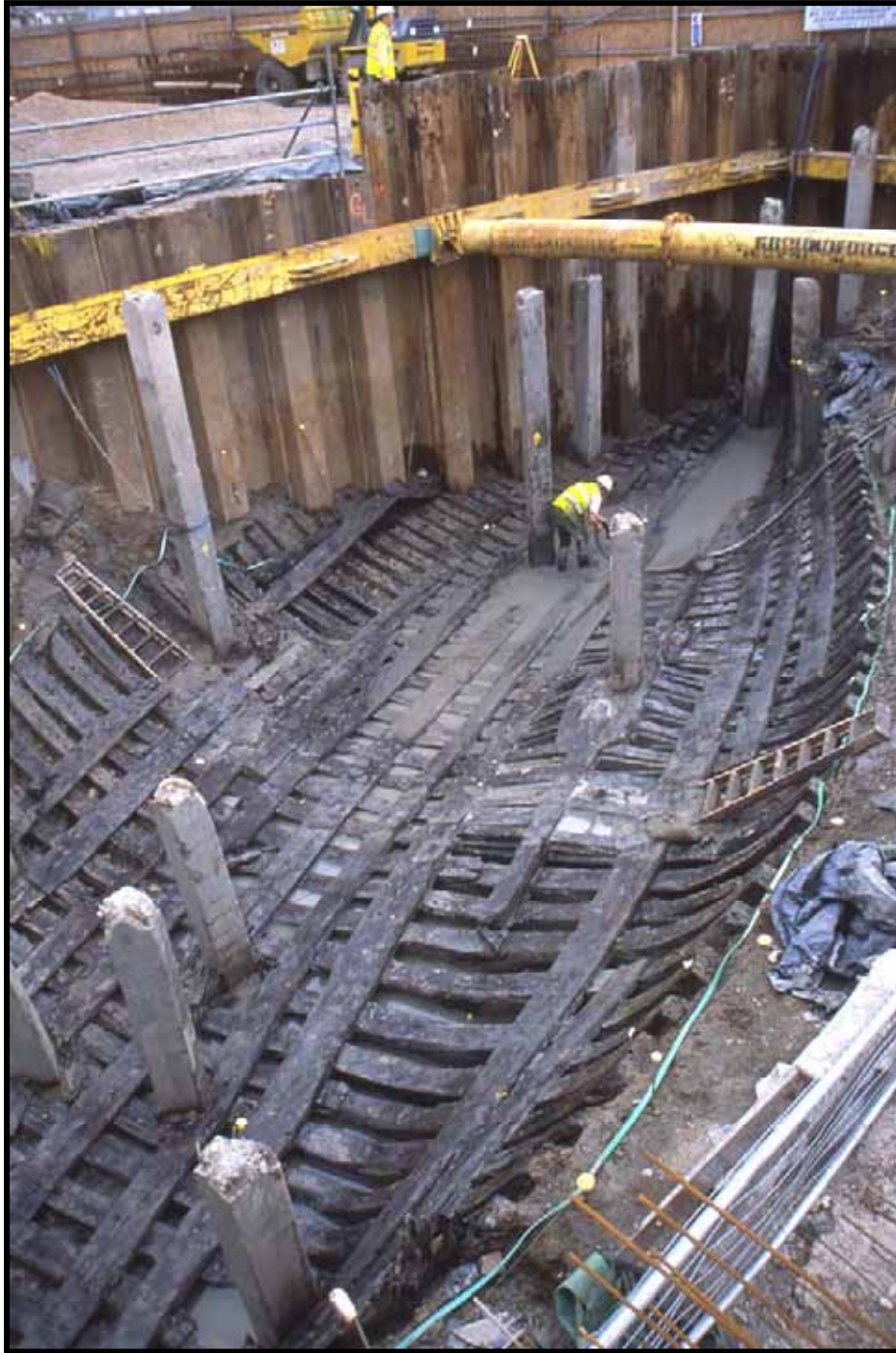


Newport Medieval Ship Project Specialist Report: STONE



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Introduction

Petrological Report on the nature and possible provenience of lithic samples from the Newport Ship excavation.

Department of Geology, Amgueddfa Cymru – National Museum Wales

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Stone catalogue

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The Newport Ship Project

Introduction

In 2002, during the construction of the Riverfront Theatre, on the banks of the River Usk in Newport, South Wales, an archaeological find of great significance was unearthed. In the summer of that year, while undertaking the excavations for the theatre's orchestra pit, the well-preserved remains of a 15th century clinker built merchant vessel were discovered.

The site, which was surrounded by a cofferdam, was being monitored by the Glamorgan Gwent Archaeological Trust at the time of discovery. The ship lay in what is locally known as a pill or small inlet, with its stern closest to the river and its bow facing into the inlet. The timbers were covered in thick alluvial mud, which created an ideal anaerobic environment for successful preservation. Seventeen strakes of planking remained on the port side and thirty-five on the starboard side of the ship. The vessel was approximately 30m in length.

A silver French coin was found purposely inserted into the keel of the vessel, dating the ship to after May 1447. Dendrochronological research has shown the hull planking to be from the Basque country and after 1449 in date.

After a much publicised 'Save Our Ship' campaign, it was decided that the ship would not be recorded and discarded but excavated with the aim to conserve. The riders, stringers, braces, mast step, frames and overlapping clinker planks and keel were dismantled one by one and lifted. Almost 2000 ship components as well as hundreds of artefacts were excavated.

This report and catalogue examines and lists the stone assemblage excavated from the Newport Medieval Ship.

**PETROLOGICAL REPORT ON THE NATURE AND POSSIBLE
PROVENENCE OF LITHIC SAMPLES FROM
THE NEWPORT SHIP EXCAVATION**



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1. Introduction

This report covers 90 lithic and mineral samples recovered from the Newport Ship excavation. Each sample was examined following the principles outlined under British Standard EN 12407:2000 (detailed are provided in Appendix A), supplemented by thin section examination under polarising light and X-ray diffraction analysis. Sample numbers quotes throughout the text refer to Maesglas numbers. Where samples comprise more than one piece of rock or mineral, where necessary these were informally assigned a,b,c, etc suffixes to differentiate them. This report was prepared by Jana Horák (AC-NMW), based on survey work undertaken by Jana Horák and Heather Jackson, with specialist input on slate from Richard Bevins.

2. Description of Samples

After visual examination the ninety samples have been grouped into the following lithological or mineralogical groups (Table 1). Details of the individual samples are given in Appendix B. Of the ninety samples 88 are of naturally occurring materials, one (1056) is a man-made glass and another (442) is a sample of slag.

	Lithological/mineralogical group	Number of samples	Samples No. in grouping
1	Acid tuff	1	415
2	Arenite (sandstone)	6	422,423,424,425,1045,1058,
3	Breccia	1	1097c
4	Calcite	1	1055
5	Chalk	1	419
6	Chert	1	416
7	Glass	1	1056
8	Limestone	8	421,852,1094,1092a,1096a,1097a,1097d,871c
9	Phyllite	2	408,409
10	Quartz mica schist	1	1062
11	Quartz	4	1038,1040,1048,1053
12	White mica with quartz	18	1035,1036,1039,1041-1044, 1046,1049-1051,1054
13	Sandstone	30	397-398,405,407, 410,411,413,420,628,1289,1290,1291,1091a,1092b, 1095a-f,1096b-f,1097b&e,871a,b&e,
14	Siltstone	1	871d
15	Slag	1	442
16	Slate	11	396, 400, 401, 402, 403, 404, 417, 418, 1037, 1052
17	Unidentified	2	414, 1059

Table 1 listing of lithics and minerals by geological classification

	Type of objects	Number of samples	Samples No. in grouping
I	Stone shot (various diameters 60-89 mm)	5	421, 422, 423, 424, 425
II	Mortar (fragment) 420	1	420
III	Whetstone	1	399
IV	Slate (11 samples 16 pieces) various thicknesses	11	396, 400, 401-404, 412,417, 418, 1037, 1052
V	Mineral fragments (quartz with or without mica, calcite)	23	1035,1036,1039,1041-1044, 1046,1049-1051,1054, 1038,1040,1048,1053,1055
VI	Fragments – man made (slag & glass)	2	442,1056
VII	Rock fragments (natural in form)	35	
VIII	Pebbles & cobbles (unmodified)	9	399,109a,1095a-f,1096c-e
IX	Other (unknowns)	3	414,416,1059

Table 2 Listing of samples by usage or possible usage

The lithologies and minerals identified can also be divided into groups by function or morphology (Table 2.). These groups are discussed in more detail below.

2.1 Group I – Stone Shot

This group comprises five samples, four of which are worked from quartz arenite (sandstone) and one from limestone. The samples of arenite, although all considered to be derived from the same general source, are not identical. All have a quartz-dominated composition with most grains being frosted or clear quartz with minor orange iron stained grains. In addition some of the samples contain minor green grains (422, 424/425), rare, smooth, black grains (423) and reddish, possibly jasper, grains (422). The most significant difference is observed in the degree of sorting of the grains, varying from well sorted to moderately sorted, and in the grain size (fine to coarse grained 125-750µm). All contain a white interstitial clay but the abundance of this varies from sample to sample. The arenite most closely resembles sandstones from the Carboniferous succession of England and Wales.

The single limestone stone shot (421) is a pale cream, ooidal limestone with no obvious fossil fragments or remains. The ooids are closely packed and variable in size, but do not exceed 750µm. The weathered surface shows a cross section of the

oids but does not show evidence of 'plucking' of the ooids commonly seen in Bath Stone, however it may still be derived from the Inferior Oolite (Middle Jurassic)...

This sample shows iron staining, however this is not a primary feature of the rock but results from contact with an iron artefacts. A black coating is also present in small patches, but this is not of geological origin.

Possible sources of stone

Sandstones

As indicated in the description the arenite shot samples, most closely resemble sandstones of Carboniferous age. It is possible that they may be derived from Old Red Sandstone strata, as sandstones, similar in some respects (grain composition, in particularly the green grains), have been described from sculptures at Tintern Abbey (Horák *in* Redknapp, 2011) which are considered to be local derivation. However, the presence of an interstitial clay infill is most commonly seen in quartz-rich sandstones of Carboniferous age. From visual examination alone it not possible to make a more informed opinion as to the source of these sandstones. Assuming the option of being derived from Carboniferous strata is correct then possible source options, with reasonable access to the coast are:-

- Minor sandstones within the Carboniferous Limestone succession of Anglesey. These are known to have been worked for millstones in medieval times, but there is not record of this lithology having been used for stone shot.
- Sandstones from the Upper Carboniferous (Silesian) otherwise known as the Millstone Grit successions. The most likely candidate within this group would be Gwespys Sandstone. Exposures are present along the Dee estuary and it is known to have been worked in medieval times as a building stone (e.g. 12th century Basingwerk Abbey).
- Sandstones are also present in Yorkshire and Lancashire, dominantly of Pendle Grit type, from the Namurian succession (Millstone Grit) and Shropshire (e.g. Grins Hill stone).

Sources outside southern Britain are not considered likely as there is limited outcrop of Carboniferous strata in the vicinity of the coast of western France, northern Spain and Atlantic Portugal. Where strata of this age are present they do not include quartz-rich sandstones.

Limestones

The limestone is considered to be derived from Jurassic strata, possible Middle Jurassic, as older limestones of Carboniferous age, although ooidal in parts, are recrystallized and have a more compact and less easily carved textures.

Figure 2 shows the outcrop of Jurassic strata in Southern Britain. Ooidal limestone-bearing Middle and Upper Jurassic strata form a swath cutting across England from East Yorkshire to Dorset. The outcrops most easily accessed from the coast are those in Dorset. It therefore does not seem unreasonable to suggest that the most likely source in Southern Britain would be from the succession in the area.

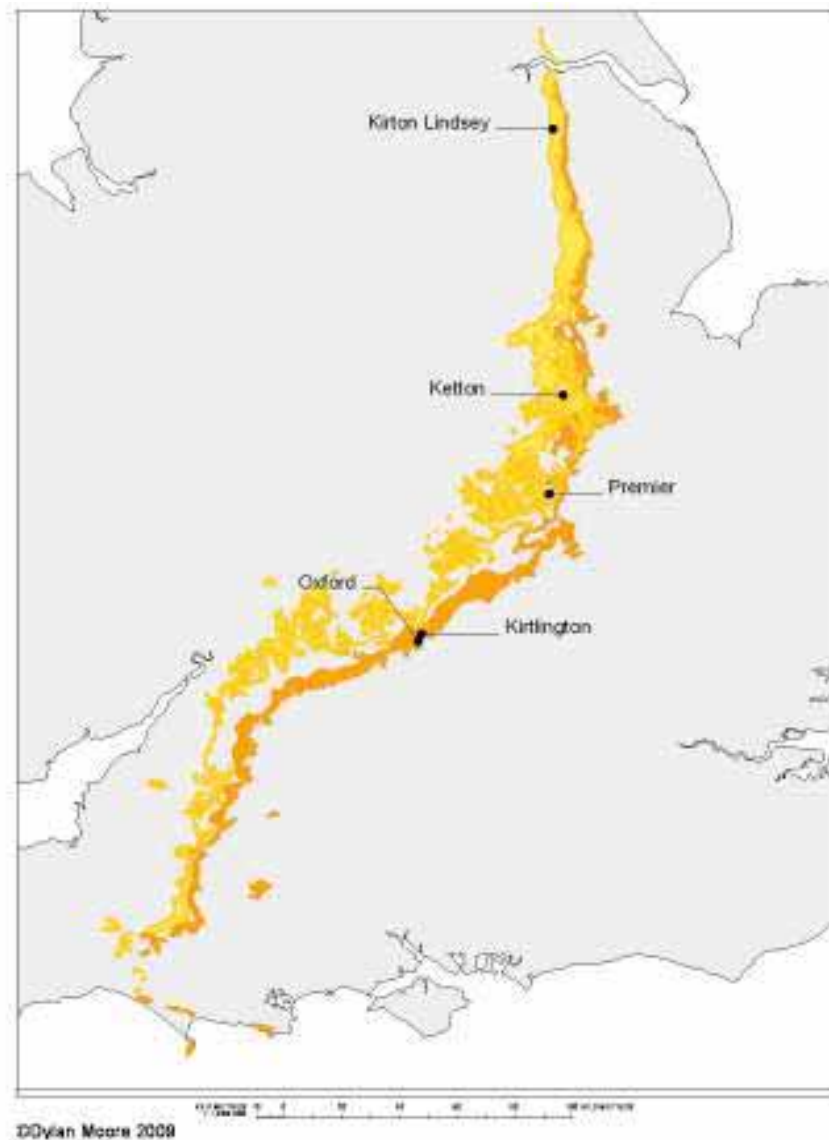


Figure 1. Map showing the outcrop of Middle and Upper Jurassic Limestones in Southern Britain.

As there is uncertainty as to the route and ports visited by the ship, and consequently the possibility of the stone shot being sourced from a source other than Dorset, the geology around the seaboard of Western Europe has also been appraised. Ireland and Northern Ireland can be dismissed instantly as a source as there are no outcrops of Jurassic oolitic limestone in this region.

Similarly both Spain and Portugal seem unlikely sources. The coastal geology is dominated by igneous and metamorphic rocks and sediments older than the Jurassic. Small areas of Jurassic rocks are present close to Gijón, in northern Spain, and on the Atlantic coast of Portugal close to Peniche. The strata at Peniche can be discounted as a possible source as the limestones are not ooidal and are highly fossiliferous. Similarly the Lower Jurassic succession at Gijón is non-ooidal and in parts highly dolomitic and the upper part of the succession is composed of lithologies other than limestones.



Figure 2. Simplified Geological Map of France. 1, 2 and 3 refer to areas of Jurassic strata accessible from the Channel and Atlantic coasts.

Three areas of Jurassic strata are exposed along the Atlantic coast and the English Channel (Figure 3). Of these area 1, around Boulogne (Figure 3) can be dismissed as although part of the succession comprises limestones, these are not ooidal. Outcrops of limestone are also present in Normandy, on the east die of the Cotentin Peninsula (2, Figure 3) and north of La Rochelle. Both these areas have strata similar to the Jurassic of Dorset and so represent possible sources.

2.2 Group II – Mortar

Sample 420, a mortar, is worked from a grey sandstone [5Y 6/1, grey]. This is medium-grained, with a homogeneous texture and contains visible grains of both white mica (muscovite) and a white mineral, most likely altered feldspar. Although

grey when fresh the rock weathers brown, reflecting iron within the matrix or as discreet grains (possibly as iron pyrites). This rock closely resembles Pennant Sandstone, which outcrops over a large area of South Wales. It is quite likely that it therefore has a local source. A more specific lithic matching might be possible if the mortar was thin sectioned.

2.3 Group III – Whetstone

Sample 399 is a grey [Munsell 5Y 5/1] pebble of well-sorted, medium-grained, micaceous, quartz-rich sandstone composition. One surface, shows evidence of slight smoothing. It is therefore suggested that this may have been used as a whetstone. The sandstone is considered to be locally derived from the Old Red Sandstone succession.

2.4 Group IV – Slate

Eleven samples (some including up to four individual rock pieces) were identified as slate (396, 400, 401, 402, 403, 404, 412, 417, 418, 1037 and 1052). All are very fine grained and vary in colour from grey to dark grey, (GLEY 1 15/N, [6 samples], GLEY 1 15/N to 6/N, [1 sample], GLEY 1 14/N to 1/4N [3 samples] and GLEY 1 14/N to 5/N [1 sample]). They show some textural variations, notably a crenulation cleavage in four samples (396, 402, 408, 412), a slight crenulation in 1 sample (403), and crenulations sufficient to warrant the term phyllite in three out of the four rock pieces of sample 404. Two samples (1052, 1037) are saccharoidal, reflecting a slightly higher quartz content than the other samples from the Newport Ship set.

Possible sources of stone

Slate is a low-grade metamorphic rock which varies in colour from dark grey, grey, green, red and even purple and results from low temperature/low pressure recrystallization of sedimentary rocks (mudstones). The effect of the metamorphism is to cause recrystallization of the original clay mineral component, either through crystal rotational or more likely through chemical dissolution/recrystallization. These processes are due to relatively mild tectonic effects in orogenic belts. Thus slates are found in areas affected by orogenesis.

In southern Britain and Ireland slates are principally of Palaeozoic age and are associated with the Caledonian and Variscan orogenies, and are found principally in the North and Southwest Wales, and to a lesser extent in Devon, Cornwall and southwest Ireland. Further north, slate is also found in the English Lake District (although because of their high volcanic component these are distinctively green to grey/green in colour), and also in Scotland, especially in the Ballachulish to Jura belt. Many of these slates, especially those from Wales and Scotland, are dark grey to grey in colour, and show the presence of crenulation cleavage and kink bands. Elsewhere in Europe, slate is found in Belgium and Luxembourg, in the Ardennes,

which forms part of the Variscan orogenic belt. The slates are typically grey to dark grey in colour. Slate also occurs on the Iberian Peninsula, notably in Portugal, at Vallongo, near Oporto, at a small number of locations in SE Galicia, Spain (Valdeorras and Orense) and western León (La Cabrera); these slates are all grey to dark grey in colour and contain the same features seen in Welsh slates, such as crenulations and kink bands.

The samples of slate from the Newport Ship show no unusual textures or colours that might permit their provenance to be established. It is therefore not possible to attribute a source for these samples, as they are very typical of slate samples that might have been derived from any of these potential sources; Wales, south-west England, Spain, Portugal, and perhaps Luxembourg/Belgium and maybe even Western Scotland.

2.5 Group V – Mineral fragments

Mineral fragments were divided between 23 samples, but comprise just three mineral species; calcite, quartz and white mica.

- **Calcite**

A single sample of calcite was identified (1055), in the form of a cleavage fragments indicating it was derived from a larger crystal. This sample is considered to be part of gravel associated with rock ballast or has been cleaved from a large piece of calcite used as ballast. Calcite is an abundant mineral, particularly in South Wales. It may therefore be locally derived but there are no specific features on this specimen that would allow this to be provenanced more specifically.

- **Quartz**

Four samples of frosted quartz (1038, 1040, 1048, 1053) were identified and are derived from vein quartz. There are no diagnostic features (i.e. associated mineralogy or unusual textures) that enable the provenance to be pin-pointed. This quartz could however be derived from the same source as the quartz and mica samples described below.

- **Mica (with or without quartz)**

These samples either occur as isolated books or plates of white mica or as plates or books inter-grown with quartz. All are broadly muscovite in composition. All the samples are considered to have a common origin. This is most likely either from pegmatite veins associated with a granite intrusion or with metamorphic rocks, such as the quartz-mica schist (1062).

Possible sources

Metamorphic rocks of sufficient grade to bear muscovite are not present in the area around the Bristol Channel, the coast of mainland Wales or across the West Country. Muscovite-bearing metamorphic rocks do occur in Anglesey, however, the mica in the samples from this study (books up to 7mm across) are too coarse to be derived

from this source and so this can be ruled out as an option. There are extensive tracts of granite and metamorphic rocks adjacent to coastal area in Cornwall, Brittany, NW Spain and northern Portugal; however it is not possible to constrain the source of the muscovite and quartz more precisely.

2.5 Group VI – Man-made products

Two samples within this study are materials not of natural origin, slag (442) and glass (1056). The slag is cryptocrystalline, and has a silica-rich composition; such that it resembles a dark opaque glass. Abundant bubbles attest to its origin and the dark colour is imparted by its iron content. Slags of this colour and compositions are typically associated with the smelting of iron. Sample 1056 is a piece of green glass containing gas bubbles.

2.6 Group VII & VII - Rock fragments and pebbles/cobbles

The largest group of samples examined are natural fragments of rock, either as angular pieces of stone or rounded pebbles and cobbles (see Table 2). Original documentation indicated that two of these samples might be roofing tiles (389,411). Both specimens are reddish-brown, homogeneous, and finely laminated sandstones but there is no evidence that indicates they have been fashioned as tilestones.

Provenance

Samples within this group show no evidence of being worked or modified and are assumed to represent stone ballast. This group contains some lithologies which can be ascribed to a source local to Newport and others that cannot. The largest sub-group of stone are sandstone identified as derived from Old Red sandstone strata (although this does not indicate that they will all be red in colour) and these can reasonably be considered to be of local derivation (e.g. 397, 398, 405, 407, 1289-1291, see Appendix B for further details). A second sub-group of limestones has a more mixed origin. Whereas those of Carboniferous and Liassic age (852, 1097c, 1096a, 871c) could be derived from South Wales, those of Cretaceous or Cretaceous/Jurassic age cannot.

Maesglas No.	Context	Details	Identification	Geological Age
419	130	Fragment	Limestone (chalk)	Cretaceous
852	130	Fragments (2)	Limestone	Carboniferous
871c	108	Fragment of stone	Limestone	Lower Jurassic, Lias
1094	130	Fragment of stone	Limestone	Cretaceous/Jurassic
1092a	130	Fragments (2)	Limestone	Cretaceous/Jurassic
1096a	128	Fragments (4)	Limestone	Lower Jurassic, Lias
1097a	129	Fragment	Limestone	Not determined
1097d	129	Fragment	Limestone	Carboniferous

Therefore the ballast in context 130 (from which stone shot 421, 422 425/525 were derived), in part at least is not derived from locally to Newport. It is possible however that all or part of this ballast was derived from the south of England where Cretaceous and Jurassic strata are exposed.

2.7 Group VIII – Other

414 (flint?), 416 (Chert?), 1059 confirm when identified

3. Summary

From the data presented in the above sections and Appendix B the following conclusions can be drawn about the nature and possible provenance of the lithic and mineral samples within each context covered by this report. These conclusions are based on the assumption that material within a context has not been mixed or contaminated by material from an older context, as most of the lithic and mineral samples originated as ballast, this possibility can not be ignored.

Context	Nature of samples	Local provenance
Context 108	siltstone, sandstone and limestone which could be derived from South Wales	Possible/probably
Context 109	Slate and chert	Unlikely
Context 120	Quartz and white mica	No, not Welsh
Context 128	Includes stone shot 423, mixed lithologies (slate, sandstone, limestone)	Possibly, in part
Context 129	Mixed lithologies (limestone and sandstone)	Possibly, in part
Context 130	Mixed lithologies, sandstone limestone and slate.	Mainly not local, some limestone may be local
Context 140	No conclusions can be drawn from this single sample as the stone is weathered	N/A
Context 142	I samples slate, I greenish sandstone.	Sandstone, possibly Slate, no
Context 152		No, external to Wales, options may include West Country, Brittany or northern Spain or Portugal. It is unlikely that this can be refined further
Context 171	Mixed context of white mica and a	Unlikely

	quartz and arenite.	
Context 437	Sandstone	Probably
Context 1001 & 1002	Slate main contexts	Unlikely, could be Welsh but not provable
Context 1017	Grey sandstone	Probably
Context 1025	Slate/phyllite	Not from immediate area could be from Pembrokeshire (?)
Context 1172	Grey micaceous sandstone	Probably

Newport Ship: Stone - a note on contexts. NN 9/3/11

66 items are listed on the Maesglas database (accessed 9/3/11). These are listed in the table below grouped by context.

Context 108 (NESHIP03)

Excavation in vicinity of bow. A dump of metalworking debris - slag, burnt clay, charcoal, soot, ash etc. Broadly contemporary with ship but probably locally derived.

Context 109

Alluvium overlying post-medieval timber drain 111. No association with medieval horizon.

Context 120

Number given to ship hull. During removal of framing timbers, the inboard face of the hull was washed down and collected material systematically as samples which have been processed leading to the recovery of usually small stone pieces. These could be intrusive but of medieval date, or more closely associated with the ship's life e.g. finer fractions of ballast???

Context 128

Alluvial deposit containing woodworking waste within the ship. At the bow (F1-F10) it directly overlies ship timbers. Majority of the timbers appear to comprise split fragments of hull planking and hacked pieces of framing. Wood assessed on site and mostly discarded. Given alluvial nature of sediment, possibility of intrusion particularly of stone items. Stone assemblage includes one stone shot recovered adjacent to hull in bow.

Context 129

Described in site record as "Deposit in 120 containing Stone Ballast". Concentration of large stone (intermixed with some timber) towards the stern. A sample of this stone was taken at the time of excavation. It may be related to abandonment of the ship rather than have a close association with the ship's life but could be former ballast.

Context 130

Deposit of alluvium in the ship. Contains most of the large structural timbers. This sediment also filled between the framing timbers and was collected as bulk samples for subsequent processing. Pieces of stone were both collected during excavation and given a location by inter-frame space (e.g. F4-5) or recovered following processing of bulk samples. Three of the stone shot derive from this context. Close association with ship.

Context 140

Context seen in section to north of ship. Stratigraphic relationship to ship uncertain. Slag and stone observed during excavation.

Context 149

Black silty deposit with frequent woodchips. Within ship along starboard side between F30-F50.

Context 152

Black gritty deposit immediately overlying hull planks. Contained many fish bones etc. Closely associated with ship. Most stone pieces derived from processing of bulk samples.

Context 171

Clay layer rich in organic material and caulking material. Located between F50-60. Closely associated with ship. Most stone pieces derived from processing of bulk samples.

Context 1001

Alluvium physically under boat on starboard side. Stratigraphic relationship is less straightforward. Interpreted as alluvium which built up outside the boat as it did inside through repeated tidal ingress to site. Stone seen as broadly contemporary with abandonment of ship.

Context 1002

Alluvium physically under boat on starboard side (below 1001). Stratigraphic relationship is less straightforward. Interpreted as alluvium which built up outside the boat as it did inside through repeated tidal ingress to site. Stone seen as broadly contemporary with abandonment of ship.

Context 1017

Slag dump seen as pre-dating deposition of ship. Possibly intentional pre-cursor to laying down of system of shoring timbers onto which the ship was heeled over.

Context 1025

Patch of alluvial clay filling depression in marl, contains wood fragment cluster. Probably predates deposition of ship.

Stone finds by Maesglas Number						
Maesglas Number	Context No	Position in the ship when found	Description	From sample	Material Group	Site No
411		deposit below S28.5B - F42-43	Roof Tile		Stone	467
399	1001		Whetstone?		Stone	467
402	1001	adj. w. 501	Slate		Stone	467
408	1001	adj. 500	Slate		Stone	467
409	1001	adj. w. 536	Slate?		Stone	467
425	1001		1 Stone Shot		Stone	467
412	1002		Slate		Stone	467
398	1017		Roof tile?		Stone	467
404	1025		Slate		Stone	467
871	108		9 pieces		Stone	NESHIP03

Stone finds by Maesglas Number

Maesglas Number	Context No	Position in the ship when found	Description	From sample	Material Group	Site No
401	109		Slate		Stone	467
416	109	F27-28 Stbd.	Stone, Flint Core?		Stone	467
415	120	F43-0	Stone (Flint?)		Stone	467
1035	120	F41-43	3 pieces - quartz	172	Stone	467
1036	120		Mica	171	Stone	467
1038	120	F25-27	Quartz	168	Stone	467
1039	120	F29-35	Mica	155	Stone	467
1040	120		Quartz	186	Stone	467
1043	120		Mica?	180	Stone	467
1044	120		Mica	172	Stone	467
1046	120	F35-39	Mica?	164	Stone	467
1047	120		Mica	17	Stone	467
1048	120		Quartz	172	Stone	467
1049	120	F45-46	Mica	186	Stone	467
1050	120	F8-12	Mica	208	Stone	467
1051	120	F46-50	Mica	195	Stone	467
1052	120	F61	Slate	221	Stone	467
1056	120		Flint?	172	Stone	467
1057	120	F54-56	Mica	198	Stone	467
1058	120	F61		122	Stone	467
1059	120	F18-20		176	Stone	467
1060	120	F29-35	Mica?	155	Stone	467
1061	120	F45-46	Mica and Quartz	186	Stone	467
1062	120	F54-56		198	Stone	467
1063	120	F11-12	Mica and Quartz	193	Stone	467
403	128	F30-40 Stbd.	Slate		Stone	467
410	128		Stone		Stone	467
423	128	F4-5 Port. Bow	Sandstone Shot		Stone	467
1037	128		Slate	033	Stone	467
1096	128		Big bag of Stone approx 10 pieces	121	Stone	467
1097	129		5 Stone	017	Stone	467
396	130	F36-37	Slate		Stone	467
414	130	F25-26	Flint Pebble		Stone	467
417	130	F41-42	Slate		Stone	467
418	130	F32-33	Slate		Stone	467
419	130	F9-10	Chalk		Stone	467
421	130	F28-29 Stbd.	Stone Shot		Stone	467
422	130		Stone Shot		Stone	467
424	130	F26-27 or F23-	1 Stone Shot		Stone	467

Stone finds by Maesglas Number

Maesglas Number	Context No	Position in the ship when found	Description	From sample	Material Group	Site No
		27				
628	130	F6-9	1 Iron Object (5938/06)???? Stone? not iron		Stone	467
852	130	F8-9	Misc. Stone		Stone	467
1092	130	F25-26 Port	2 Stone	141	Stone	467
1094	130	F45-46	2 Stone	062	Stone	467
1095	130		5 Stone	053	Stone	467
413	140		decayed Stone?		Stone	467
400	149	F30-40 Stbd.	Slate		Stone	467
407	149		Stone		Stone	467
397	152	F 44-45	possible Whetstone		Stone	467
1042	152	F36-37	Mica	136	Stone	467
1053	152	F20-21.5	Quartz	094	Stone	467
1054	152		Mica?	108?	Stone	467
1055	152		Quartz	124	Stone	467
1091	152	F8-9	1 Stone and 2 Mica	055	Stone	467
1041	171	F58-59	Mica	218	Stone	467
1045	171	F58-59	Quartz	218	Stone	467
405	u/s		Roofing tile		Stone	467

Comments on Context for Newport Ship Artefacts: Slate, Fired Clay

NN 16/11/2009

These notes were compiled to assist in the interpretation of material groups being passed to Oxford Archaeology for assessment and/or analysis. Unfortunately, it became apparent that context records had been removed from the archive and were not available for detailed interrogation. These records will need to be examined in making a more considered assessment of the contexts of these material groups, once they again become available for study.

Slate

Slate from the excavations are numbered as 11 separate items including one (MSG401) from context 109, alluvium overlying post-medieval timber drain 111, which clearly post-dated the deposition of the ship.

Five items from context 128,130 and 149 were found within the vessel to which varying degrees of precision of location are given in the table below. In the majority of cases this slate appears to have mortar adhering to it suggesting previous use.

Five items derived from contexts 1001, 1002 and 1025 were from below the ship. It should be stressed however that these areas may have been accessible for deposition of smaller material prior to the ship's collapse and hence cannot be considered as sealed by the ship's arrival. Again the majority of this slate appears to have mortar adhering to it suggesting previous use. Locational information in three instances is linked to the positions of numbered timbers shown on plan. It is also clear from context descriptions and plans that at least some of these contexts e.g. 1001 contained significant quantities of stone, the majority which was not recovered for further analysis.

On balance there is no strong evidence to suggest that the slate recovered from within the boat, or indeed that found underneath it is directly related to cargo.

Maesglas Number	Context No	Small Find No	Position in the ship when found	Description	Material Group
Deposits 'below' ship on starboard side					
402	1001		adj. w. 501	Slate	Stone
408	1001		adj. 500	Slate	Stone
409	1001		adj. w. 536	Slate?	Stone
412	1002	315		Slate	Stone
404	1025			Slate	Stone
Deposits post-dating ship					
401	109			Slate	Stone
Deposits within and directly above ship's timbers					
403	128		F30-40 Stbd.	Slate	Stone
396	130		F36-37	Slate	Stone
417	130		F41-42	Slate	Stone

418	130		F32-33	Slate	Stone
400	149		F30-40 Stbd.	Slate	Stone

Fired Clay (Plaster?)

A single item, initially identified as plaster and recovered from a bag of concretions (MSG 560, context 145, F40-41S) has been re-categorised by OA as fired clay (possible daub). This context was restricted to a relatively small area on the starboard side of the vessel containing shell, slag, animal bone and concretions (retained), and sandstone fragments and woodchips (not recovered). At the time of excavation there was some discussion of the possibility that this material was intrusive, having been forced into the interior of the vessel during disturbance/collapse. As such, association with the ship, let alone any posited wattle and daub structure within it is far from certain.

Slag

Recovered during excavation

Site No	Maesglas Number	Context No	Position in the ship when found	Description
Post-dating ship Post medieval				
467	451	109		Alluvium overlying timber drain 111
467	448	117		Deposit of alluvium, W- FE slag & timber
467	426	118		Fill of drain 111 W. much wood chips
467	431	125		Deposit of wood working waste
Post-dating ship Medieval				
467	453	138		Seen in south facing section north of starboard side forward of amidships (dr 023)
467	452	140		Seen in south facing section north of starboard side forward of amidships (dr 023)
467	444	141		Seen in south facing section north of starboard side forward of amidships (dr 023). Overlay 140 unconformably
467	428	145	F40-41 Stbd.	See text in section on fired clay for comment on this context
467	438	155	F8-11	Slag seen in section in vicinity of frame 8 (dr112)
467	449	157		Slag seen in section in vicinity of frame 8 (dr112)
467	441	169	F56-57 Port.	Slag seen in section south (outside) and above surviving level of port side
Within ship?				
467	432	120	F17 Port	Within ship
467		128		Within ship Slag, Fragments
467	439	128	F30-40 Stbd.	Within ship

Site No	Maesglas Number	Context No	Position in the ship when found	Description
467	445	128		Within ship. Smelting slag
467	440	130		Within ship below 128
467	446	130	F26-27P	Within ship below 128
467	447	130		Within ship below 128
467	427	u/s	S18.5B - F42.3	Within ship
467	443	u/s	F39 Stbd.	Within ship
'Below' ship				
467	430		under S3	Below ship
467	429	1025		
Unrelated to ship				
467	442	2027	see bag for coords	Basement excavation
467	437	2027		Basement excavation
467	450	u/s		?
Excavation of bow area, Oxford Archaeology				
NESHIP03		104		Alluvial clay silts overlying deposit 108, the boat timbers and deposit 113
NESHIP03		105		ditto
NESHIP03		106		Slag from adjacent to stem post
NESHIP03		106		ditto
NESHIP03		108		A grey silt containing 70% metalworking residue - slag, tap slag, charcoal, burnt clay, elements of furnace base charcoal etc. Deposit 108 filled 109 but had also been dumped up against the boat timbers (stem post 131 and all portside outer planking.)
NESHIP03		108		ditto
NESHIP03		108		ditto
NESHIP03		108		ditto
NESHIP03		108		ditto
NESHIP03		108		ditto
NESHIP03		108		ditto
NESHIP03		108		ditto

Material which clearly post-dates the ship includes post-medieval contexts 467/109, 117, 118 and 125 from the main ship excavation trench, 2027 from the basement excavation and contexts NESHIP03 104 and 105 from the bow area.

The stratigraphic relationship between a number of slag bearing contexts excavated in the vicinity of the ship is ambiguous. At least some of this material appears to have been deposited prior to construction of the large timber structure on which the ship's starboard side came to rest (e.g 1025 plus other contexts in the 1000's which were

described as containing slag but from which no material appears to have been recovered). Contexts indicated in the table above as medieval but postdating the ship can not be securely associated with the ship as they came from areas where excavation was restricted. None of this material can be said to be securely associated with activities directly related to repair or refit of the ship itself but could be considered as reflective of activities in the urban settlement of medieval Newport. The same can be said for the material identified as coming from within the ship. Although the stratigraphic relationship with deposition of the ship is clear for this material, the suggestion in the post-excavation assessment that this probably reflects “background activity” holds true. This can also be said of the slag from NESHIP03 contexts 106 and 108 in the bow area.

Recovered from samples

Slag (sometimes categorised as industrial waste?) was recovered from processed environmental samples as given in the tables below. Where the context is given as 120, this material has normally come from sediment removed from the inner face of the outer hull after the removal of framing timbers. In some cases, these samples are described as ‘washings’ and there is a risk of contamination with unstratified material. Contexts 128, 152, 171 are from within the ship. Contexts 1001, 1007, 1013, 1017, 1018, 1022 relate to limited excavation below and beyond the starboard side of the vessel. These contexts appear to predate deposition of the ship but some caution is necessary as water-filled voids between the outboard face of the starboard side, structure 1004 and the contemporary riverbed might have allowed ingress of slag rich dumps of material.

Box 19

Site Code	Context Number	Sample Number	Frame Number
467	(128)	<033>	
467	(128)	<033>	
467	(171)	<190>	60-61
467	(1018)	<432>	
467	(120)	<172>	
467	(120)	<172>	
467	(2027)	<300<	
467	(120)	<208>	
467	(1007)	<417>	
467	(120)	<168>	25-27
467	(120)	<195>	46-50
467	(120)	<155>	
467	(120)	<220>	
467	(120)	<163>	
467	(120)	<221>	F61
467	(152)	<124>	56-57
467	(1001)	<410>	

467	(1013)	<418>	
467	(171)	<190>	60-61
467	(120)	<172>	41-43
467	(152)	<131>	34-35
467	(120)	<182>	14
467	(120)	<171>	21-23
467	(120)	<179>	
467	(120)	<182>	14
467	(120)	<179>	
467	(120)	<175>	40-41
467	(120)	<223>	59-62
467	(1001)	<410>	
467	(120)	<182>	14
467	(1018)	<432>	
467	(120)	<221>	
467	(120)	<155>	29-35
467	(1013)	<418>	
467	(1013) this should be context 1017	<423>	
467	(120)	<164>	35-39
467	(120)	<201>	52

BOX 22 INDUSTRIAL WASTE			
Site Code	Context Number	Sample Number	Frame Number
467	(1013) this should be context 1017	<423>	
467	(1013) this should be context 1017	<423>	

BOX 23 INDUSTRIAL WASTE			
Site Code	Context Number	Sample Number	Frame Number
467	(120)	<172>	41-43
467	(120)	<221>	
467	(1013)	<418>	
467	(1017)	<423>	
467	(120)	<223>	59-62
467	(1001)	<410>	
467	(1022)	<422>	
467	(120)	<223>	59-62
467	(1001)	<403>	
467	(1001)	(410>	
467	(1001)	<410>	
467	(1001)	<403>	
467	(1013)	<423>	
467	(1013)	<424>	
467	(1017)	<423>	
467	(1013)	<424>	
467	(1013)	<424>	
467	(1013)	<424>	
467	(1022)	<422>	
467	(1022)	<422>	
467	(1022)	<422>	
467	(1001)	<410>	
467	(1013)	<424>	
467	(1013)	<424>	
467	(1013)	<424>	
467	(1013)	<424>	
467	(1022)	<422>	
467	(1013)	<424>	
467	(1001)	<410>	
467	(1013)	<423>	
467	(1013)	<424>	
467	(1022)	<422>	



Context: 130

Type: Slate

Weight: 57g

Dimensions: 90mm x 65mm x 50mm

Function: unknown

Description: No nail holes. Displays a textural variation from other samples, notably a 'crenulation cleavage'. However, lack of distinctively unusual colours or textures makes provenancing difficult, and consequently may have been derived from the following sources: Wales, south-west England, Spain, Portugal, Luxembourg/Belgium or Western Scotland. (from report by Horak et al 2011).



Context: 152

Type: Sandstone

Weight: 147g

Dimensions: 85mm x 65mm x 15mm

Function: Possible whetstone

Description: Light brownish grey in colour. Fine - medium sandstone very micaceous. Laminations of black grains. Carboniferous - devonian 250mm - 375mm. Oxidised iron. Arenaceous sandstone with mica, orange (?feldspar) grains, black (organic grains?). Weak lamination on mm scale with iron pyrites (oxidised). Possibly locally derived.



Context: 1017

Type: Sandstone

Weight: 589g

Dimensions: 180mm x 85mm x 17mm

Function: Roof tile?

Description: Very well sorted, medium-fine grained. Quartz dominated, micaceous sandstone, with additional superficial iron-staining. Laminations on mm scale. Possibly locally derived ?Carboniferous/Devonian. No evidence of being whetstone.



Context: 1001

Type: Sandstone composition

Weight: 302g

Dimensions: 130mm x 40mm x 30mm

Function: Whetstone?

Description: Natural elongate pebble of quartz-rich, micaceous sandstone. Medium grained, very well sorted. Possible local provenance. ?Carboniferous/Devonian. Possible whetstone, some surface appears slightly smoothed.



Context: 149

Type: Slate

Weight: 171g

Dimensions: 120mm x 100mm x 9mm

Function: Unknown

Description: No circular pits (cf 401) Individual partings, very fine ca1mm. Plainer surfaces. Very fine grained, unknown provenance and lithological source.



Context: 109

Type: Slate

Weight: 121g

Dimensions: 102mm x 77mm x 7mm

Function: Unknown

Description: Slate parting overall 7mm. individual partings very fine ca1mm. Cavities in the slate, 0.5mm in diameter (typical) Slightly crenulated ? No nail holes. Very fine grained, unknown provenance and lithological source.



Context: 1001

Type: Slate

Weight: 145g

Dimensions: 105mm x 85mm x 9mm

Function: Unknown

Description: Fine crenulation. Fragment parting 8mm. Individual parting very fine. Locally pitted associated with Iron Oxides. Very fine grained. Unknown provenance and lithological source.



Context: 128

Type: Slate

Weight: 227g

Dimensions: (Larger) 125mm x 65mm x 10mm;
(Smaller) 112mm x 70mm x 7mm

Function: Unknown

Description: No nail holes. Slight crenulations on surface. No pits. Fragement 8mm. Parting very fine. Colour variable. Very fine grained, unknown provenance, ?Carboniferous/Devonian.



Context: 1025

Type: Slate/Phyllite

Weight: 323g

Dimensions: Largest is 115mm x 111mm x 3mm

Function: Unknown

Description: 3 samples of phyllite showing crenulation lamination, 1 sample of slate. Provenance Devon, Pembrokeshire or further afield. ?Carboniferous/Devonian. Partial coating with lime mortar, indicating use in construction



Context: u/s

Type: Sandstone

Weight: 1087g

Dimensions: 205mm x 160mm x 20mm

Function: Roofing tile

Description: Grey/green quartz-dominated micaceous sandstone. Laminated on 5 mm scale, very homogeneous. Fine grained, very well sorted. Locally derived, ORS, possible Senni beds. Does not appear to have been worked.



Context: 149

Type: Sandstone

Weight: 465g

Dimensions: 150mm x 120mm x 15mm

Function: Unknown

Description: Triangular in plan. Pale green/grey sandstone, quartz-dominated with mica, showing iron staining along laminations and fractures. Fine grained, very well sorted. Locally derived, ORS possible Senni beds.



Context:1001

Type: Phyllite

Weight: 250g

Dimensions: 180mm x 125mm x 5mm

Function: unknown

Description: No nail holes. Showing both intersection and crenulation lineations. Provenance Devon, Pembrokeshire or further afield. Partial coating with lime mortar, indicating use in construction.



Context: 1001

Type: Phyllite

Weight: 179g (combined)

Dimensions: Larger piece is 135mm x 75mm x 7mm

Function: unknown

Description: Largest piece has two possible partial nailholes. Provenance Devon, Pembrokeshire or further afield. Unknown lithographical source. Partial coating with lime mortar, indicating use in construction.



Context: 128

Type: Sandstone

Weight: 201g

Dimensions: 80mm x 75mm x 17mm

Function: Unknown

Description: Quartz-rich micaceous sandstone. Well sorted, quartz, feldspar (white), mica and black grains (organic), thin laminations mm scale. Fine grained, very well sorted. Possibly locally derived, Carboniferous/Devonian? Iron stained on weathered surface.



Context: u/s

Type: Sandstone

Weight: (combined) 810g

Dimensions: (Largest) 115mm x 100mm x 17mm

Function: Roof tile

Description: 10 fragments of red mica-ceous sandstone, with ripple laminations. Very fine grained, very well sorted. Possibly locally derived, ORS/Devonian. Natural fragments of stone, no evidence for use as roofing tile.



Context: 1002

Type: Slate

Weight: 311g

Dimensions: 175mm x 130mm x 7mm

Function: Unknown

Description: No nail holes; Shows plumose texture on one side, fine crenulation cleavage (mm scale) on reverse. Fragment 5mm thick. Individual partings very fine. Very fine grained, unknown provenance and lithogological source.

No Photo Required

Context: 140	Description: Coarse sandstone highly decayed, no further analysis possible. Unknown provenance and lithological source.
Type: Sandstone	
Weight: 28g	
Dimensions: 50mm x 30mm x 20 mm	
Function: Unknown	

No Photo Required

Context: 130	Description: White chacedony/chert with partial black coating (not of natural origin). Unknown provenance and lithological source.
Type: Unidentified	
Weight: 4g	
Dimensions: 19mm x 12mm x 5 mm	
Function: Unknown	

No Photo Required

Context: 120	Description: Dark grey with possible quartz crystals. Unknown provenance and lithological source.
Type: Stone (Acid Tuff?)	
Weight: 4g	
Dimensions: 15mm x 15mm x 12 mm	
Function: Unknown	

No Photo Required

Context: 109	Description: Dark grey chert with paler grey weathered margin (c. 12mm)and undetermined fossils fragments. Unknown provenance and lithological source.
Type: Chert	
Weight: 25g	
Dimensions: 55mm x 30mm x 20mm	
Function: Unknown	

No Photo Required

Context: 130

Type: Slate

Weight: 6g

Dimensions: 45mm x 30mm x 1mm

Function: Unknown

Description: Fine plumose texture. Very even colour. Fragment 2mm. Individual partings, very fine. Very fine grained, unknown provenance and lithological source.

No Photo Required

Context: 130

Type: Slate

Weight: 11g

Dimensions: 55mm x 12mm

Function: Unknown

Description: Uniform composition with some muscovite mica. Fragment thickness, 6mm, fine parting. Unknown provenance and lithological source.

No Photo Required

Context: 130

Type: Chalk

Weight: 6g

Dimensions: 20mm x 20mm x 15mm

Function: Unknown

Description: Typical sample of chalk, no fossils observed. Not Welsh provenance - S. England? Cretaceous.



Context: u/s

Type: Sandstone

Weight: 3.46kg

Dimensions: Base 52mm thick; walls vary 27-50mm

Function: Mortar

Description: Quartz-dominated, micaceous sandstone. Similar to 399, superficial iron staining from external source. Medium grained, very well sorted. Possibly locally derived, Carboniferous.

Newport Medieval Ship Stone Catalogue		Maesglas No: 420
Context: u/s	Description: Quartz-dominated, micaceous sandstone. Similar to 399, superficial iron staining from external source. Medium grained, very well sorted. Possibly locally derived, Carboniferous.	
Type: Sandstone		
Weight: 3.46kg		
Dimensions: Base 52mm thick; walls vary 27-50mm		
Function: Mortar		



Context: 130

Type: Limestone

Weight: 623g

Dimensions: 80mm diameter

Function: Shot

Description: Ooidal limestone, no other fossil debris, suggests [Painswick Limestone] , Inferior Oolite. Grain size = ooids <750µm. Non Welsh provenance, Middle Jurassic (Inferior Oolite?).



Context: 130

Type: Arenite (Sandstone)

Weight: 193g

Dimensions: 55mm diameter

Function: Shot

Description: Similar to 424/425 small, with greenish grains. Fine grained, very well sorted. Unknown provenance, not locally derived. Carboniferous?



Context: 128

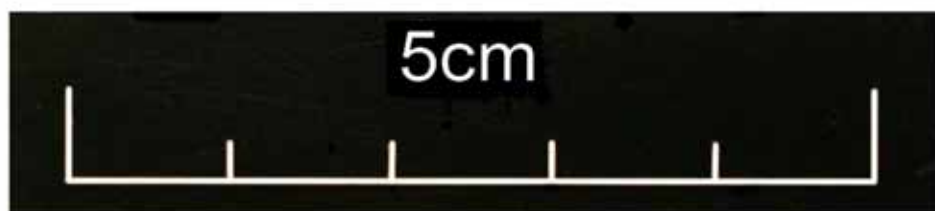
Type: Arenite (Sandstone)

Weight: 643g

Dimensions: 80mm diameter

Function: Shot

Description: Quartz dominated lacking greenish grains but with orange/brown iron stained grains. Fine grained, very well sorted. Unknown provenance, Carboniferous?



Context: 130

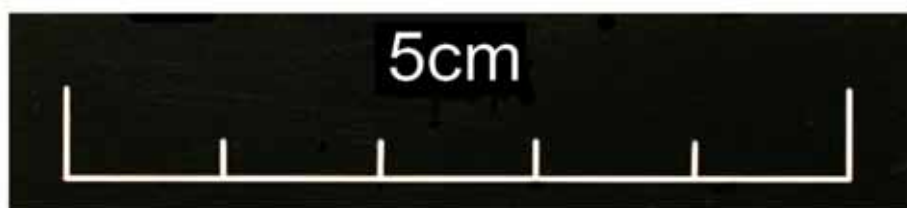
Type: Arenite (Sandstone)

Weight: 624g

Dimensions: 82mm in diameter

Function: Shot

Description: Stone shot (large), quartz-dominated, grained supported minor iron-stained quartz grains. More poorly sorted than small shot and will lower diversity of grains. Very fine grained, moderately well sorted. Unknown provenance, not locally derived. Carboniferous?



Context: 1001

Type: Arenite (Sandstone)

Weight: 416g

Dimensions: 70mm diameter

Function: Shot

Description: Stone shot (small), quartz-dominated, grained supported with orange iron-stained) grains and green (unidentified) grains. Fine grained, well sorted. Unknown provenance, not locally derived. Carboniferous? Sandstone reminiscent of SST used for monuments at Tintern Abbey.



Context: 130

Type: Sandstone

Weight: 147g

Dimensions: 111mm x 68mm x 11mm

Function: Unknown

Description: Natural fragment of coarse-grained sandstone, with quartz pebbles up to 6mm diameter, containing weathered-out pyrite which is decaying to produce sulphate minerals. Coarse grained, poorly sorted, weathered surface. No provenance and lithological source.

No Photo Required

Context: 130	Description: 2 small pieces of locally sourced, carboniferous limestone
Type: Limestone	
Weight: Largest is 9g	
Dimensions: Largest is 30mm x 16mm x 10mm	
Function: Unknown	



Context: 108

Type: Sandstone/Limestone/siltstone (9 pieces)

Weight: 681g combined

Dimensions: Largest is 90mm x 75mm x 25mm

Function: Unknown

Description: (a) 3 pieces of fine, highly micaceous sandstone, finely laminated. Fine grained, very well sorted. O.R.S. (b) 3 pieces grey sandstone similar to 399, medium grained, very well sorted, carboniferous? (c) 1 piece of grey limestone, homogenous, Jurassic. (d) Red, fine, quartz rich micaceous siltstone. Very fine grained, O.R.S. (e) 1 grey, slightly micaceous sandstone. Very fine grained, very well sorted. O.R.S/Carboniferous. All could be locally derived.

Newport Medieval Ship Stone Catalogue		Maesglas No: 1035
<div>No Photo Required</div>		
Context: 120		Description: white mica (muscovite). Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, N.E. Spain. Unknown lithological source.
Type: White mica with quartz		
Weight: 1g combined (3 pieces)		
Dimensions: Largest is 8mm x 7mm x 5mm		
Function: Unknown		

Newport Medieval Ship Stone Catalogue		Maesglas No: 1036
<div>No Photo Required</div>		
Context: 120		Description: white mica (muscovite). Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain, unknown lithological source.
Type: White mica with quartz		
Weight: 2g combined (20+ pieces)		
Dimensions: Largest is 8mm x 7mm x 6mm		
Function: Unknown		

No Photo Required

Context: 128	Description: Fragment 1 4mm thick ,very fine parting. Fragment 2 1mm thick, fine parting. Slightly coarser grains than other slates. Saccharoidal texture. Very fine grained. Unknown provenance. Carboniferous, Devonian?
Type: Slate	
Weight: 3g combined (2 pieces)	
Dimensions: Largest is 25mm x 10mm x 4mm	
Function: Unknown	

No Photo Required

Context: 120	Description: Unknown provenance and lithological source.
Type: Quartz	
Weight: 2g	
Dimensions: 7mm x 7mm x 6mm	
Function: Unknown	

No Photo Required

Context: 120	Description: White mica (muscovite) reflective white in colour. Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: White mica with quartz	
Weight: 1g combined (8+ fragments)	
Dimensions: N/A	
Function: Unknown	

No Photo Required

Context: 120

Type: Quartz

Weight: 2g

Dimensions: 15mm x 10mm x 5mm

Function: Unknown

Description: Quartz dominated lacking greenish grains but with orange/brown iron stained grains. Unknown provenance and lithological source.

No Photo Required

Context: 171	Description: white mica (muscovite) (12mm across). Provenance not Wales, unknown lithological source.
Type: White mica with quartz	
Weight: 2g	
Dimensions: 13mm x 10mm x 4mm	
Function: Unknown	

No Photo Required

Context: 152	Description: white mica (muscovite). Provenance not Wales, unknown lithological source.
Type: White mica with quartz	
Weight: 1g combined (2 fragments)	
Dimensions: Largest is 6mm x 2mm x 1mm	
Function: Unknown	

No Photo Required

Context: 120	Description: white mica (muscovite). Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: White mica with quartz	
Weight: 1g combined (approx. 20 fragments)	
Dimensions: Largest is 0.5mm x 0.5mm	
Function: Unknown	

Newport Medieval Ship Stone Catalogue		Maesglas No: 1044
No Photo Required		
Context: 120	Description: white mica (muscovite). White/reflective in colour. Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.	
Type: White mica with quartz		
Weight: 1g combined (3 flakes)		
Dimensions: Largest is 5mm x 3mm x 0.5mm		
Function: Unknown		

No Photo Required

Context: 171	Description: small fragment of quartz, slightly iron-stained. Unknown provenance and lithological source.
Type: Flint? (quartz)	
Weight: 6g	
Dimensions: 20mm x 12mm x 11mm	
Function: Unknown	

No Photo Required

Context: 120	Description: white mica (muscovite). Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: White mica with quartz	
Weight: 1g combined (15 flakes)	
Dimensions: Largest is 5mm x 5mm x 0.5mm	
Function: Unknown	

No Photo Required

Context: 120	Description: white mica (muscovite). Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: White mica with quartz	
Weight: 1g combined (5 flakes)	
Dimensions: Largest is 5mm x 3mm x 0.5mm	
Function: Unknown	

No Photo Required

Context: 120	Description: quartz. Unknown provenance and lithological source.
Type: Quartz	
Weight: 3g combined (3 pieces)	
Dimensions: Largest is 13mm x 7mm x 5mm	
Function: Unknown	

Newport Medieval Ship Stone Catalogue		Maesglas No: 1049
<div>No Photo Required</div>		
Context: 120		Description: white mica (muscovite) & quartz. Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown source.
Type: White mica with quartz		
Weight: 3g combined (20 pieces)		
Dimensions: Largest is 8mm x 5mm x 2mm		
Function: Unknown		

No Photo Required

Context: 120	Description: white mica (muscovite). Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: White mica with quartz	
Weight: 2g	
Dimensions: 5mm x 5mm x 2mm	
Function: Unknown	

Newport Medieval Ship Stone Catalogue		Maesglas No: 1051
<div>No Photo Required</div>		
Context: 120		Description: white mica (muscovite). Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: White mica with quartz		
Weight: 1g combined (approx. 10 pieces)		
Dimensions: 7mm x 5mm x 2mm		
Function: Unknown		

No Photo Required

Context: 120	Description: Triangular-shaped. Very fine grained. Slight saccharoidal texture. Fragment 1, 2.5mm thick, very fine parting. Fragment 2, 1mm, very fine parting. Unknown provenance and lithological source.
Type: Slate	
Weight: 1g combined (2 pieces)	
Dimensions: 12mm x 10mm x 2mm	
Function: Unknown	

Newport Medieval Ship Stone Catalogue		Maesglas No: 1053
<div>No Photo Required</div>		
Context: 152		Description: Unknown provenance and lithological source.
Type: Quartz		
Weight: 1g		
Dimensions: 11mm x 6mm x 5mm		
Function: Unknown		

Newport Medieval Ship Stone Catalogue		Maesglas No: 1054
<div>No Photo Required</div>		
Context: 152		Description: white mica (muscovite) Reflective surfaces. Provenance not Wales. Unknown lithological source.
Type: White mica with quartz		
Weight: 1g combined (2 flakes)		
Dimensions: Largest is 7mm x 3mm x 2mm		
Function: Unknown		

Newport Medieval Ship Stone Catalogue		Maesglas No: 1055
<div>No Photo Required</div>		
Context: 152		Description: Calcite cleavage fragment, yellowish white. Unknown provenance and lithological source.
Type: Calcite		
Weight: 1g		
Dimensions: 10mm x 7mm x 4mm		
Function: Unknown		

No Photo Required

Context: 120	Description: white mica (muscovite) & quartz. Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: Mica with quartz	
Weight: 3g combined (12 flakes)	
Dimensions: Largest is 10mm x 7mm x 3mm	
Function: Unknown	

Newport Medieval Ship Stone Catalogue		Maesglas No: 1058
No Photo Required		
Context: 120	Description: Fragment (?) of quartz arenite (similar to that used for the shot) with hematite coating and larger quartz pebbles. Unknown provenance, Carboniferous?	
Type: Quartz arenite		
Weight: 9g combined (2 pebbles)		
Dimensions: Largest is 30mm x 17mm x 10mm		
Function: Unknown		

No Photo Required

Context: 120	Description: No identification made. Unknown provenance and lithological source.
Type: Unidentified	
Weight: 1g	
Dimensions: 10mm x 5mm diameter	
Function: Possible natural fossil?	

No Photo Required

Context: 120	Description: white mica (muscovite) Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: White mica	
Weight: 1g	
Dimensions: 6mm x 3mm x 1mm	
Function: Unknown	

Newport Medieval Ship Stone Catalogue		Maesglas No: 1061
<div>No Photo Required</div>		
Context: 120		Description: white mica (muscovite) and quartz. Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain. Unknown lithological source.
Type: Mica & quartz		
Weight: 7g		
Dimensions: Largest is 12mm x 7mm x 5mm		
Function: Unknown		



Context: 152

Type: 1 sandstone and 2 white mica & quartz

Weight: 800g combined

Dimensions: Largest is 95mm x 60mm x 55mm

Function: Unknown

Description: Sandstone: Pale arenitic sandstone, homogeneous. Fine grained, well sorted. Provenance not S Wales

White mica & quartz: present in vein? Provenance not S. Wales, possibly Cornwall, Brittany, Portugal, NE Spain.



Context: 130

Type: 2 limestone and 1 quartz arenite (sandstone)

Weight: 400g combined

Dimensions: Largest is 100mm x 62mm x 40mm

Function: Unknown

Description: Limestone: Pale, limestone similar to 1094. Not Welsh provenance, S. England? Cretaceous/Jurassic.

Sandstone: Flake of quartz arenite, partially stained by iron (secondary). Fine grained, very well sorted, unknown provenance.



Context: 130

Type: Limestone

Weight: 300g combined (2 pieces)

Dimensions: Largest is 95mm x 90mm x 45mm

Function: Unknown

Description: Recrystallised limestone containing fragments of echinoderm spines. Not Welsh provenance, S. England? Cretaceous/Jurassic.



Context: 130

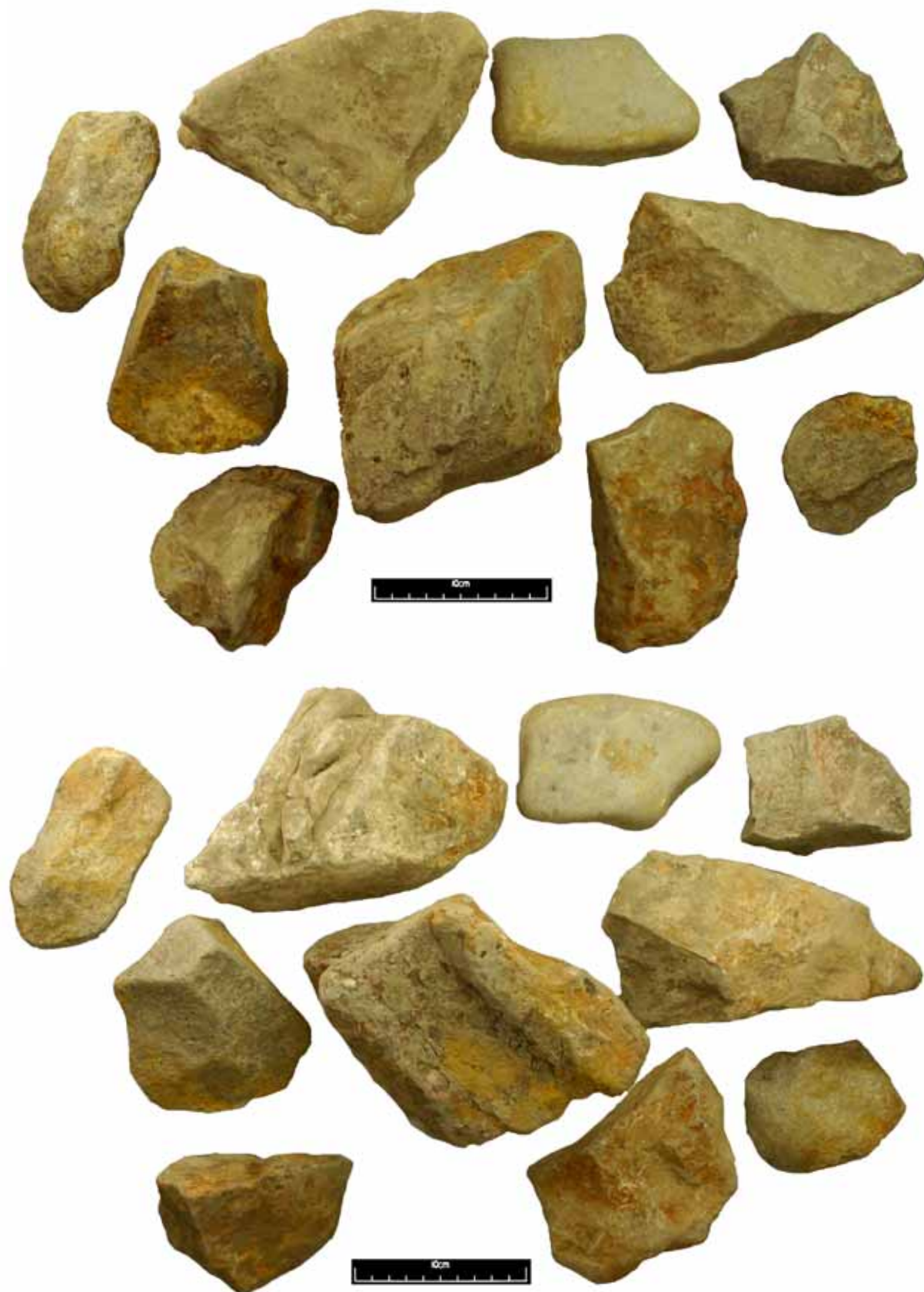
Type: Sandstone

Weight: 3.9kg combined (6 pieces)

Dimensions: Largest is 130mm x 120mm x 40mm

Function: Unknown

Description: (a) Fractured cobble. Quartz arenite, homogeneous, quartz cemented. Coarse-grained, well sorted. (b) Part of fractured cobble. Quartz arenite, homogeneous, quartz cemented slightly finer-grained than 1095a. (c) Quartz arenite with quartz cement, surface coating precludes further examination. (d) Fractured cobble. Quartz-rich sandstone with quartz cement. (e) Fractured cobble. Quartz-rich with black grains (5%) and quartz cement. (f) Cobble. Could be locally derived. Quartz arenite, homogenous, quartz cemented. Others have unknown provenance.



Context: 128

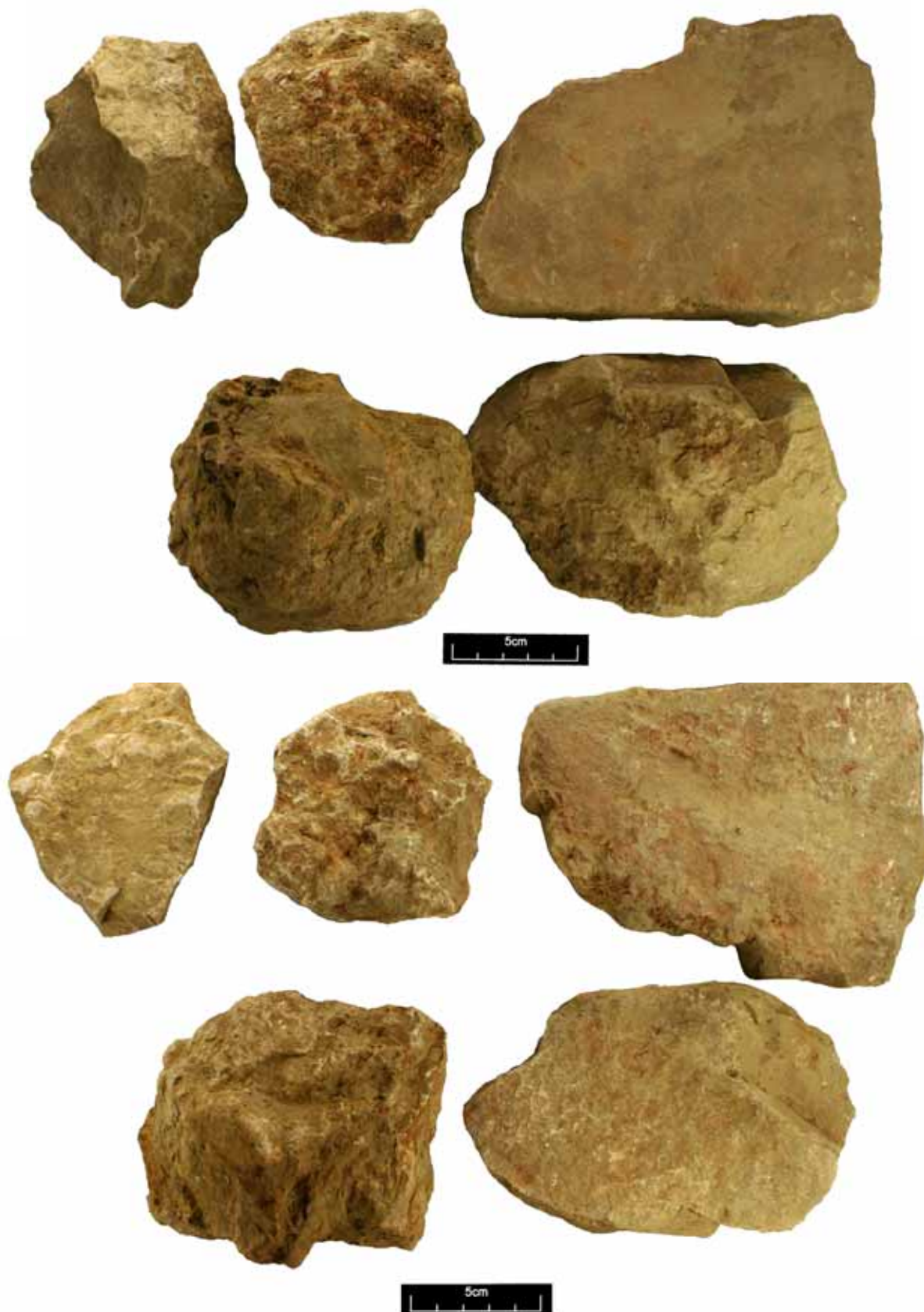
Type: 4 Limestone 5 Sandstone

Weight: 4.08kg combined (9 pieces)

Dimensions: Largest is 190mm x 110mm x 65mm

Function: Unknown

Description: (a) Homogeneous, grey recrystallised limestone. Could be locally sourced, Jurassic. (b) Laminated red micaceous sandstone with prominent clasts/ concretions of white limestone (up to 50 mm). Medium grained, well sorted. (c) ? Volcanic rocks. (d) Quartz dominated sandstone with quartz cement and kaolinite infill. Coarse grained, very well sorted. (e) Sandstone, quartz arenite with quartz cement. Fine-medium grained, very well sorted. All apart from (a) have unknown provenance.



Context: 129

Type: 2 Limestone, 2 Sandstone, 1 Breccia

Weight: 5.18kg combined (5 pieces)

Dimensions: Largest is 165mm x 130mm x 40mm

Function: Unknown

Description: (a) Pale limestone, recrystallised. (b) Quartz arenite, massively bedded.

Medium grained, very well sorted. (c) Sandstone pale green/grey clasts, fine-grained and micaceous, cemented by barite. Very fine grained, very well sorted. (d) Ironstained along veins. Bearing crinoid ossicles, and ? Brachipod fragments. (e) Homogeneous, micaceous quartz-dominated sandstone with coarser layer containing mudclasts. Fine grained, well sorted. (a) & (b) provenance unknown. (c), (d) & (e) possibly locally derived.

No Photo Required

Context: u/s

Type: Sandstone (2 pieces)

Weight: N/A

Dimensions: N/A

Function: Unknown

Description: Two pieces of sandstone found in MSG 437 bag of slag. Homogeneous, micaceous, quartz-dominated sandstone smaller frgment coarser grined than larger one. Fine-medium grained, very well sorted, locally derived. Natural fragment - no evidence of use as whetstone.

No Photo Required

Context: u/s	Description: One piece of sandstone found in MSG 1172 bag of slag. Homogenous, micaceous, quartz-dominated sandstone with minor lithic component. Fine grained, very well sorted, possibly locally derived ORS. Natural fragment - no evidence of use as whetstone.
Type: Sandstone (1 piece)	
Weight: N/A	
Dimensions: N/A	
Function: Unknown	

No Photo Required

Context: u/s

Type: Sandstone (1 piece)

Weight: N/A

Dimensions: N/A

Function: Unknown

Description: One piece of sandstone found in MSG 702 bag of slag. Micaceous sandstone dominated by quartz, locally iron stain, but may be superficial. Medium grained, moderately well sorted, possibly locally derived ORS. Natural fragment - no evidence of use as whetstone.