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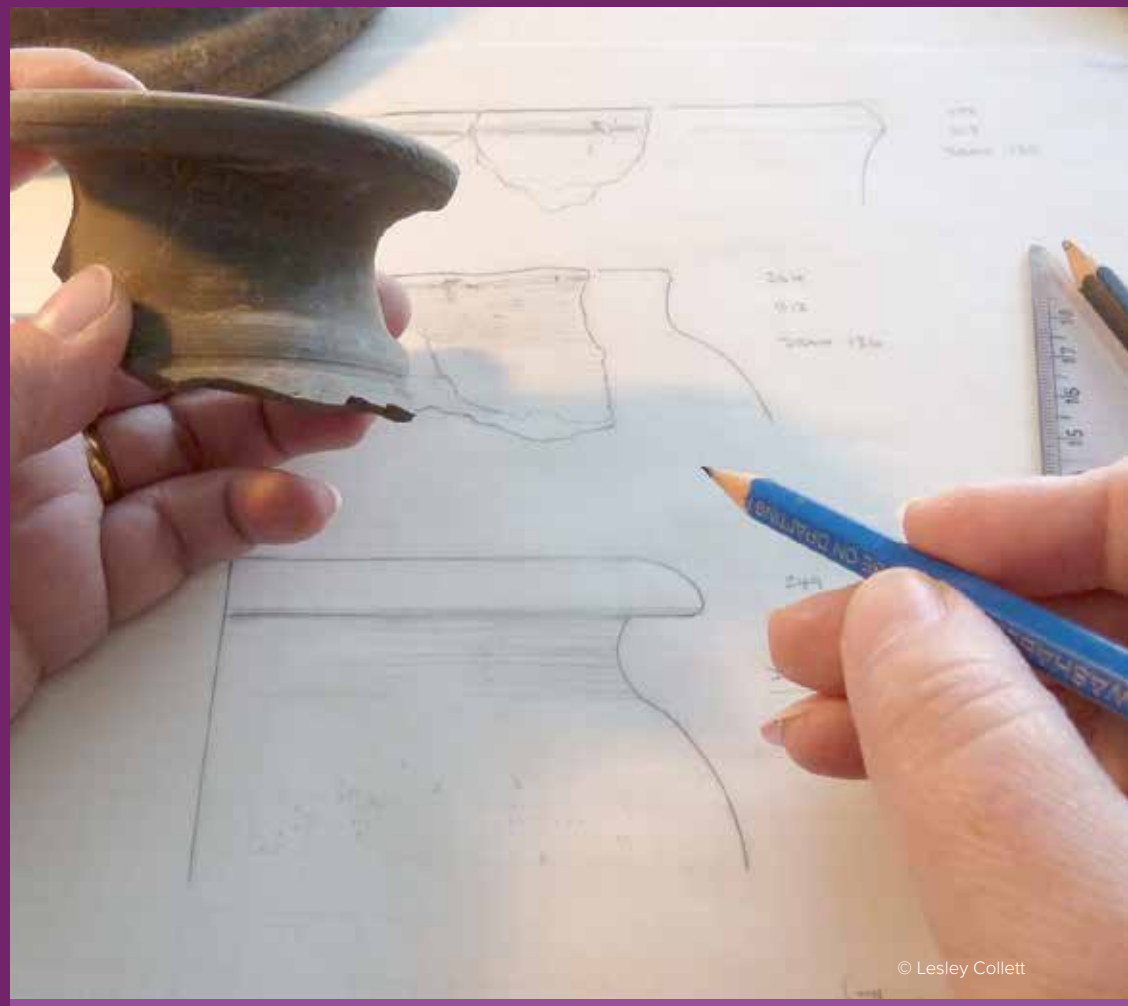
CIfA Professional Practice Paper:
Introduction to Drawing Archaeological Pottery

Lesley Collett



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Introduction to drawing archaeological pottery

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Introduction

This paper is intended as an introductory guide to the basic techniques of drawing pottery for archaeological purposes. Despite advances in photographic and scanning techniques, the main reasons why pottery is depicted using line illustration are still valid. Very few pots recovered from archaeological contexts are complete enough for a photograph to provide useful information; a drawing can also supply far more information in a much more immediate manner than a written description.

It is essential to show the form of the pot, its cross-section, construction techniques and any decoration, using recognised conventions which allow different vessels to be compared and readily understood by different workers.

Traditional methods of illustration are now increasingly being supplemented by computer-aided graphic and photographic techniques which may make it easier to depict fabric types and enhance the presentation of the information.

Although a number of guides to drawing pottery have been published over the years, it is some time since anything new has appeared in print. In the intervening years, digital and computer technology have revolutionised the production of reports and the graphics they contain. This introduction sets out to demonstrate current practice in the preparation of pottery illustrations and describes how traditional methods of producing pottery drawings can be integrated with and enhanced by digital technology.

1. Drawing pottery

Archaeological pottery drawings are highly conventionalised; vessels are shown in cutaway side view (orthographic projection being the technical term), so that both the exterior form and the section of a three-dimensional vessel are presented on the same two-dimensional drawing. The section/profile is shown on the left-hand side of a centre line, together with any interior detail, and the exterior is shown on the right. Some Eastern European and other countries reverse this and show the section on the right, but the principle is the same.

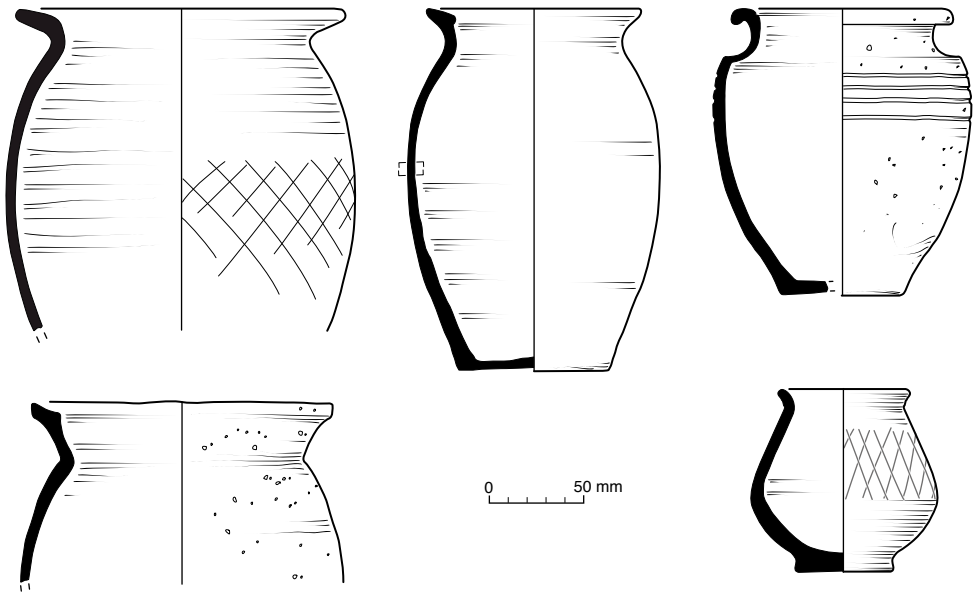

Fig 1: Examples of the most usual method of illustrating archaeological pottery, in elevation view with the left-hand side showing the section through the vessel, the right-hand showing the external view

Pottery is generally drawn initially at full size (1:1) and reproduced at 1:4 or sometimes 1:3, although there may be exceptions for very large or very small vessels, or where very complex decoration is present (see below, Preparing pottery drawings for publication).

Some pottery specialists like additional information (eg % vessel present) included in the drawing as a small pie chart.

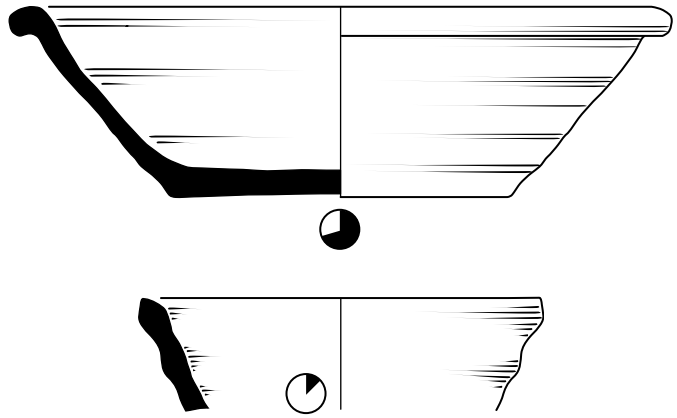

Fig 2: Small pie charts incorporated into the drawing indicate the proportion of the vessel present

Fig 3: Some tools which might be used for pottery drawing: vernier callipers, profile gauge, set squares, proportional dividers, pens and pencils

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2. Tools and equipment

The list below comprises the author's personal preferences for drawing materials and equipment.

- Pencils – a range of different pencils is useful, a hard lead (3-4H) for outlines, softer pencils for shading, details, transferring profiles, etc. A sharp pencil is essential; mechanical pencils with 0.5 and 0.3mm leads are suitable. A Steadtler 2mm leadholder occasionally comes in useful for marking in vertical points.

- Drawing board – A3 or larger, depending on the size of the vessel(s) you wish to draw. Parallel motion can be useful but is not essential.

- Tracing paper for initial pencil drawing. (90 gsm is a good weight – anything less is flimsy, anything more is too expensive.) Scrap pieces of tracing paper or drafting film can be used for transferring profiles. Some illustrators prefer polyester drafting film for pencil roughs, but a bit of 'tooth' in the surface may be preferable: drafting film is liable to smudge unless a very hard pencil is used, and it is also more expensive.

- Callipers or dividers for measuring the thickness of a vessel wall.

- Engineer's square, set squares, blocks. When choosing a set square, look for one with graduations which start flush with the edge so that measurements can be taken from the table surface. In the absence of an engineer's square, a free-standing set square can be made by fixing a block of wood or suitable weighted box flush with the base of a normal set square.

- Radius chart. This can be made by simply drawing concentric arcs of radii from 10mm to c. 300mm in 10mm increments with a compass. Alternatively, you can buy specialist polar graph paper sheets. It may be useful to mark off percentages around the circumference so that, for example, the percentage of rim present can easily be recorded. The table below gives the degree values to mark off to represent various percentages:

10%	20%	30%	40%	50%	60%	70%	80%	90%
36°	72°	108°	144°	180°	216°	252°	288°	324°

- Profile gauge or solder wire for measuring profile. A good-quality profile gauge with fine metal teeth is preferable, although this may be difficult to find, and great

care must be taken to avoid damaging the pot; a metal-toothed profile gauge should never be used on fragile handmade pottery. Solder wire is available from hardware shops – for health and safety reasons lead-free solder wire is recommended.

- Drafting film – a semi-transparent matt polyester film (known to archaeologists by the defunct tradename 'Permatrace') available in a range of weights. This has the advantage over paper of being dimensionally stable, tear- and waterproof, but will need a harder pencil. Can be used for initial pencil or final inked drawings.

- Technical pens (e.g. Rotring Isograph, Staedtler Mars) in several sizes, depending on the reduction required on final drawing. 0.35mm, 0.25mm and 0.5mm are the most useful sizes for general purposes.

- Drafting tape – for taping paper onto a drawing board, and also temporarily holding sherds together while gluing. (NB the tape should be removed from the pot as soon as possible!)

- Cigarette paper/fine tissue paper/clear acetate film – for rubbings or tracings of decoration or stamps.

- Graphite stick, graphite flakes or graphite powder for making rubbings.

- Scalpel and scalpel blades for sharpening pencils and erasing pencil and/or ink. Swann-Morton of Sheffield produce the finest range; number 15 is particularly useful for drawing purposes.

- Sand tray – a large tray such as cat litter tray filled with sand is useful for propping up incomplete vessels during refitting. Alternatively a bag filled with small polystyrene beads can be used as a 'bean bag' for support.

- Cellulose nitrate adhesive (e.g. HMG – available from most conservation suppliers) for refitting sherds. Do not use an adhesive which is non-reversible, or very difficult to undo, such as epoxys or superglues.

- Acetone – for undoing poor joins and mistakes in repaired pottery.

- Compasses – occasionally useful for finding the radius of very large vessels, or for drawing radius charts.

- Flatbed scanner – for importing draft drawings into computer drawing packages, or scanning inked drawings for incorporation into final publication files.

- Graphics tablet – for drawing in computer packages, a pen and tablet may be easier and more comfortable than a mouse. Wacom (www.wacom.de) produce very good ones. More economical brands are also available, such as the Huion, below.

Safety note: many of the items in use in the drawing office can be dangerous (scalpel blades and other sharp points, glue and solvents) and care should be taken at all times when using them. A sharps box for disposal of used scalpel blades etc should be provided, and a first aid kit should be easily accessible.

3. Method

The techniques employed for drawing pottery described below are those used and developed by the author over the last 20 years as a professional illustrator. Other illustrators use different tools or materials; personal preference plays some part in the choice, as does availability of time and equipment. This paper describes the minimum amount of specialist equipment and the most economic media and materials, which should be generally available to most people.

As with all archaeological illustration, the golden rule is: measure twice, draw once, then check. Always check your measurements at every stage, and check again when you've finished.

Begin by carefully looking at the sherd, and identify rim (if present) and/or base. Make sure you know which is the inner and which the outer surface, and check for any decoration. If you have a drawing brief or catalogue description from the pottery specialist, well and good, although it is not unknown for them to change their minds at a later stage (bases may become lids and so forth)!

Prepare a drawing board, and attach the tracing paper lightly with drafting tape. (If you do not have a drawing board with parallel motion, it is helpful to use a backing sheet of graph paper as a guide.)

3.1 Rim attitude

Place the rim top-down against a flat surface and rock it back and forth until the rim 'sits' on the surface with minimum movement; in regular wheel-thrown vessels, no light should be seen between the rim line and the surface. This will indicate the angle at which the rim sits.

It is important to judge this correctly; if the angle is misjudged the whole form of the pot can be misinterpreted.

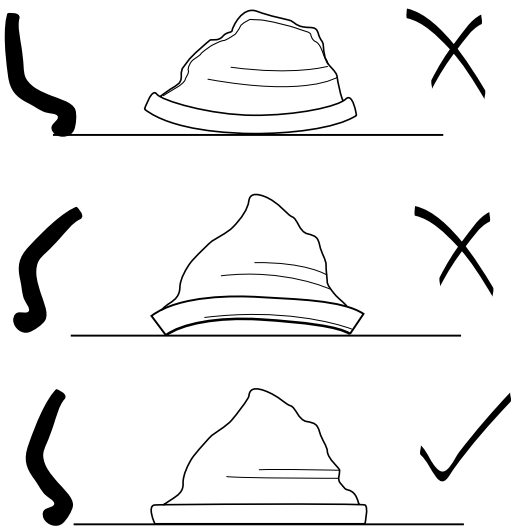

Fig 4: Judging the angle of the rim

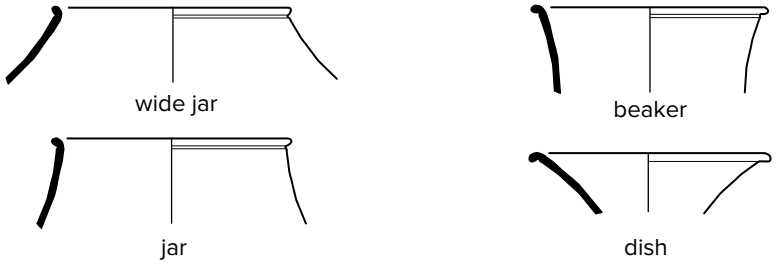

Fig 5: The same rim sherd drawn at different angles can suggest widely different pot forms

3.2 Rim diameter

With the rim in the correct attitude, and viewing directly above the rim, slide the sherd across a radius chart until the outer edge coincides exactly with one of the concentric lines. With irregular or handmade pots this can sometimes be a matter of 'best fit' rather than an exact match.

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Fig 6: Using a rim diameter chart

Rule a faint horizontal pencil line near the top of the drawing paper, the length of the rim diameter. (Note that the diameter at the rim may be less than that further down the pot, so check the maximum diameter of the sherd and allow plenty of space either side of the rim line on the drawing.) Mark a point halfway along the rim line.

A tip for finding the radius of vessels larger than the average radius chart, particularly if only a small proportion of the circumference survives: holding the rim upside down, lightly trace round the outer edge with a pencil onto a large sheet of paper (**a** on Fig 7). Place the point of a pair of compasses on one end of the pencil line and draw a small circle (about 3cm diameter). Draw an identical circle centred on the point where the first circle intersects with the pencil line of the rim. Draw a straight line across the intersection of the circles (**d**). Repeat the procedure at the other end of/further along the rim line. The two lines will intersect, giving the centre point and the radius of the pot.

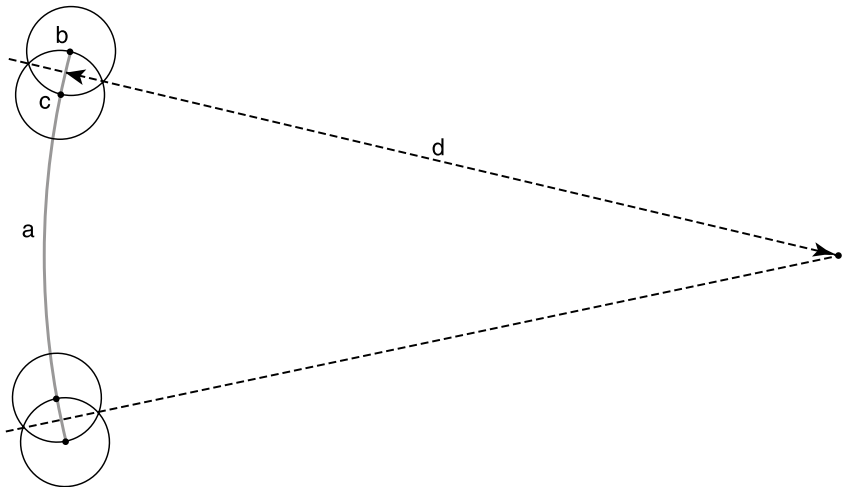


Fig 7: Technique for finding the radius of large fragmentary vessels using compasses

3.3 Height

Holding the rim in its correct attitude, measure the height of the sherd using a set square. Two set squares, or a set square and an engineer's square, will give a more accurate result. (Fig 8)

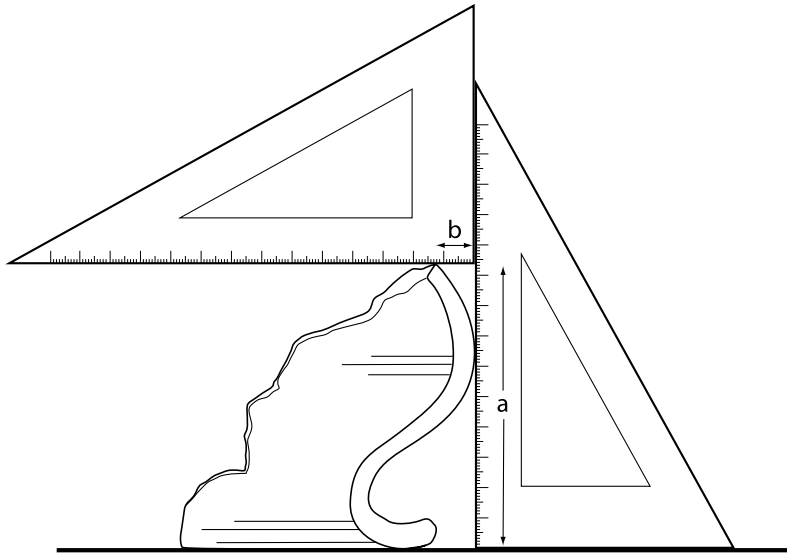


Fig 8: Measuring the height of a sherd

Draw the centre line of the pot, vertically from the rim line, the length being the sherd height you have just measured. If the base of the pot is present, another horizontal line can be drawn for this; measure the base radius in the same way as the rim radius (Fig 9).

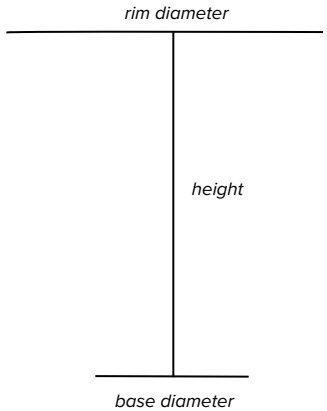


Fig 9: First stage of drawing complete, with rim radius, base radius and centre line drawn

3.4 Profile

The outer profile of the sherd can be measured in various ways, such as by positioning the pot on its side with its rim against a block of wood (see Griffiths et al, 1990, p60; Grinsell, Rahtz and Price Williams, 1974, p46) and tracing the outline with an engineer's square (Fig 10).

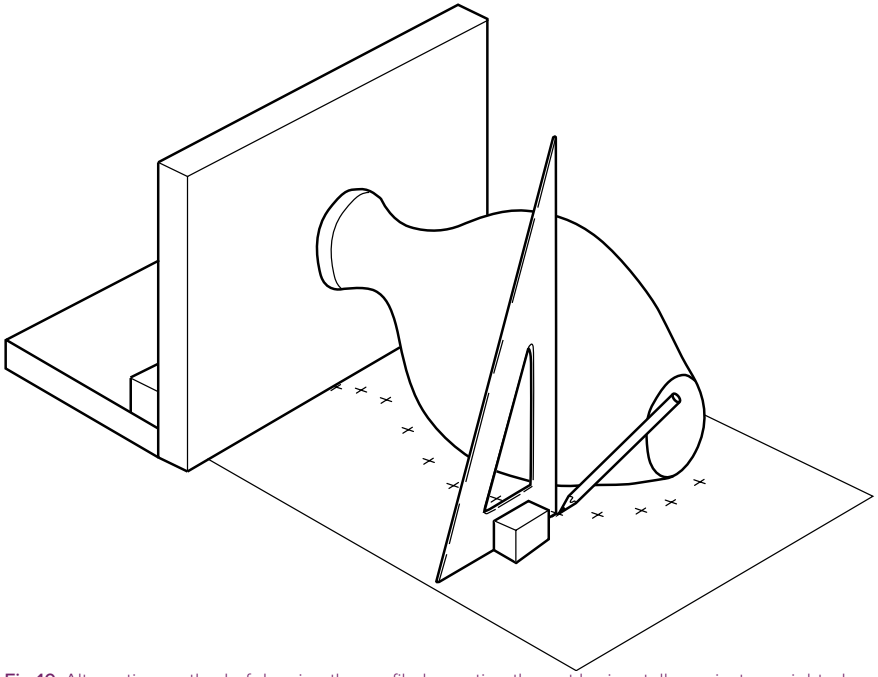


Fig 10: Alternative method of drawing the profile by resting the pot horizontally against a weighted backboard and directly sighting down and dropping points from the pot onto the drawing paper; (after Grinsell, Rahtz and Price Williams, 1974)

However, it is generally more accurate to use a combination of set squares and profile gauges (Fig 11). First, holding the sherd rim-down in its correct attitude, place a vertical set square against the outer surface, as in the method used for measuring the height above. With a second square, or dividers, measure how far from this vertical edge various points along the profile are (pick points about 10mm apart, as well as important points such as changes of angle at shoulder). Plot these points faintly onto the left-hand side of the drawing. Then, for the detail of the curve of the pot, use a profile gauge. Always look at the sherd carefully whilst drawing the profile, and be sure to re-check anything that doesn't look right.

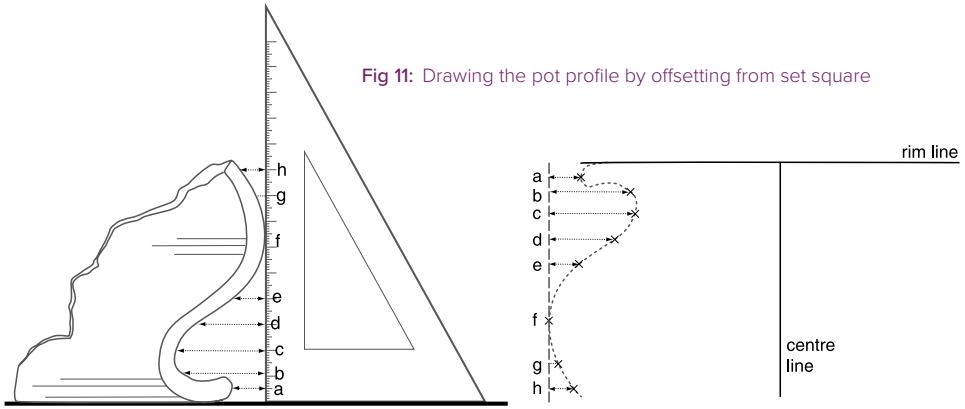
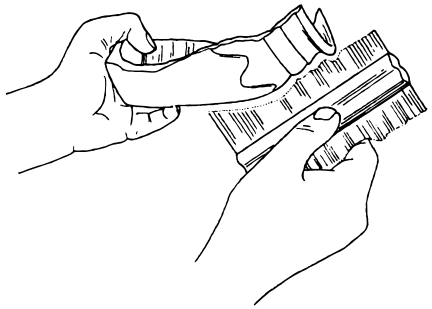


Fig 11: Drawing the pot profile by offsetting from set square

Tip: if using a profile gauge, press the teeth firmly against the curve of the pot (never use a profile gauge on fragile or soft-fired pottery!). To trace the profile, place the teeth of the gauge flush against the surface of the drawing board – this helps minimise inaccuracy – and trace with a pencil onto a small piece of paper. This can then be added to the main drawing.



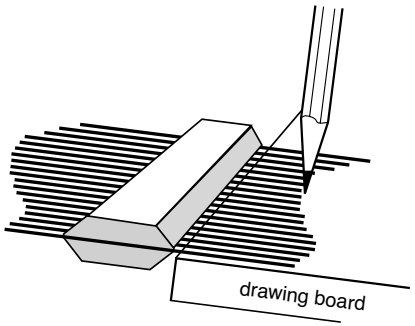


Fig 12: Using a profile gauge to produce an accurate profile curve

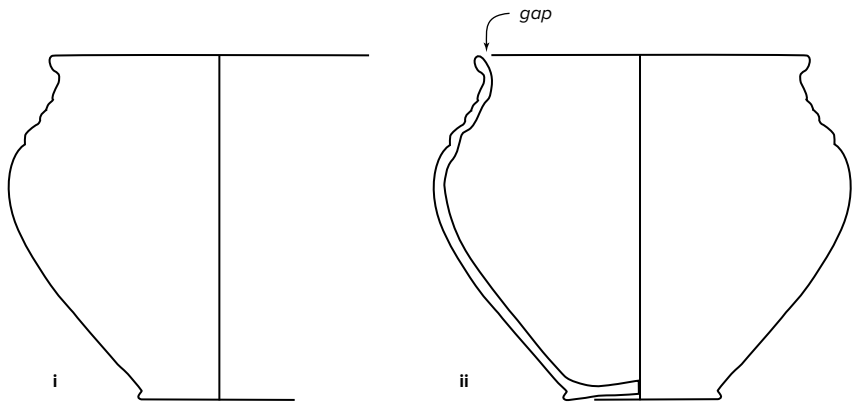


Fig 13: Profile added to left-hand side of drawing and mirrored onto right-hand side; internal profile added to left-hand side

The internal profile may be drawn in by measuring the thickness of the sherd every 10mm or so, and at any particularly identifiable points (e.g. changes of angle, cordons, etc) with callipers or dividers, and transferring the measurements to the drawing. Again, check carefully by eye, holding the sherd against the drawing for comparison (Fig 13).

Transfer the outer profile of the pot to the right-hand side. Using a scrap of tracing paper, simply trace the outer profile, mark on the top and bottom of the centre line, reverse the paper and trace back onto the right-hand side. Remove any portions of the profile that are 'hidden' in the external view, for example by an overhanging rim (Fig 14).

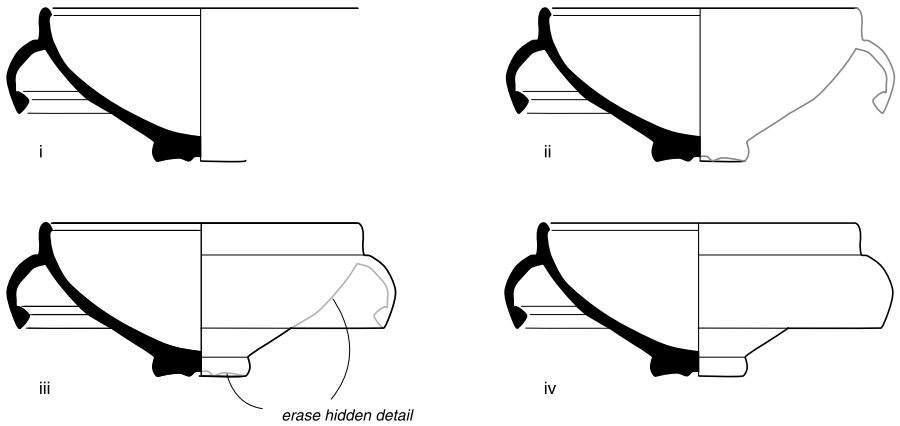


Fig 14: Transferring the profile to the right-hand (exterior) side and removing 'hidden' portions

Details of the outer surface of the pot can be drawn onto the right-hand side of the drawing; horizontal decoration on wheel-made pots simply by horizontal ruled lines. Wavy lines, lattice work, rouletting, etc can be transferred accurately to the drawing by the following method:

Using a compass, draw an arc of the radius of the pot at the point at which the decoration occurs. This represents 90° of the outside of the pot. Using callipers or dividers, measure distances between points in the pattern along a horizontal line, and transfer these to the arc. Place the arc above the pot drawing, and measure down vertically from the points you have measured, to the horizontal line. Mark the points, and draw in the decoration (Fig 15).

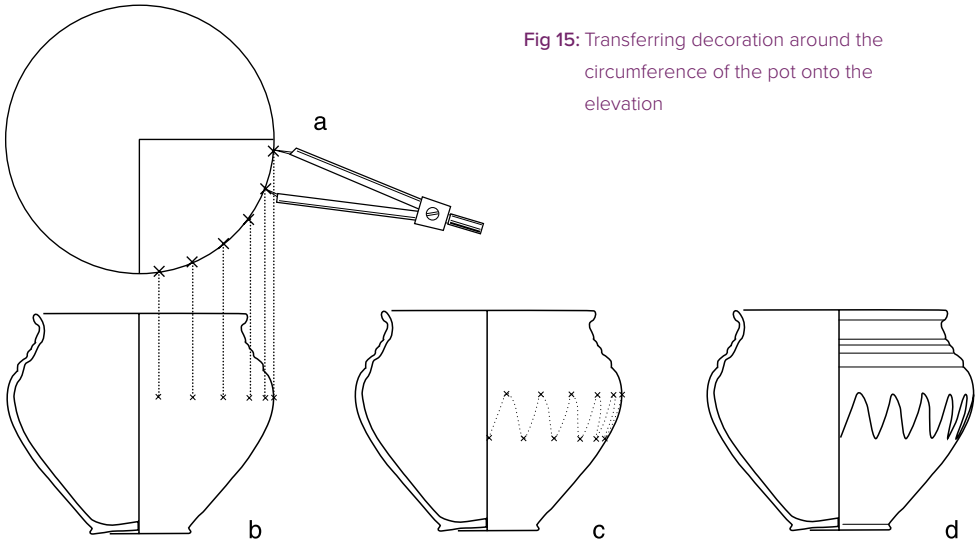


Fig 15: Transferring decoration around the circumference of the pot onto the elevation

Any internal details which require drawing, such as mortaria grits, internal decoration or rilling can be drawn onto the left-hand side.

3.5 Reconstruction

Where the profile of a pot is reconstructed from several sherds, these may be shown in outline on the drawing (Fig 16) – a technique more frequently used for handmade vessels. Alternatively, use dashed lines to show reconstructed portions of the vessel (Fig 17). A pie diagram is sometimes used to show the proportion of the original pot present.

Continuation lines, two short parallel lines projecting beyond the end of the existing section of the pot are used when it is not possible to reconstruct the vessel, and to indicate when a vessel is incomplete; they are normally only shown on the left-hand, section side of the drawing.

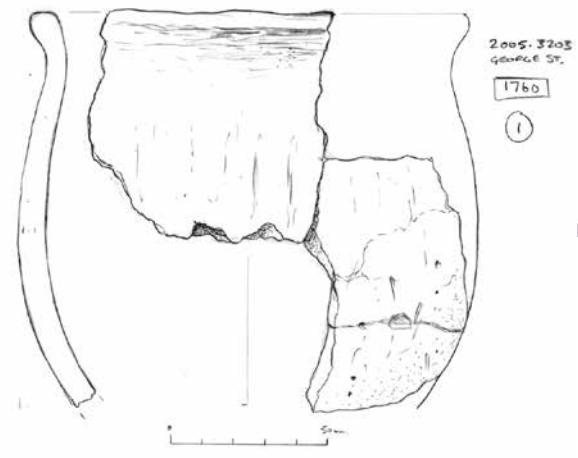


Fig 16: Handmade pot with section reconstructed from two overlapping sherds

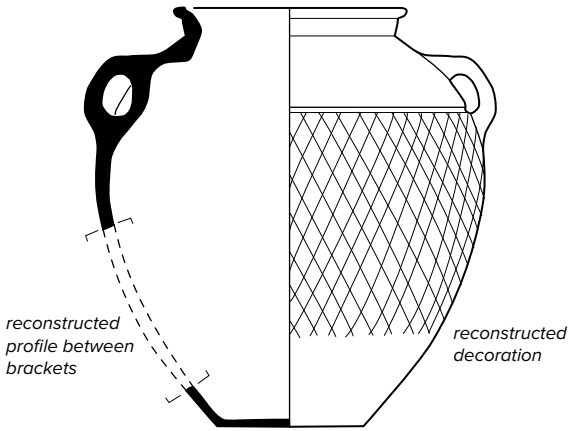


Fig 17: Base and upper portions of a vessel survive; the reconstructed profile of the pot is shown by dashed lines

Where a profile has been built up from two overlapping but non-joining sherds of the same vessel, brackets can be used to show the area of overlap (Williams, 1993) (Fig 18).

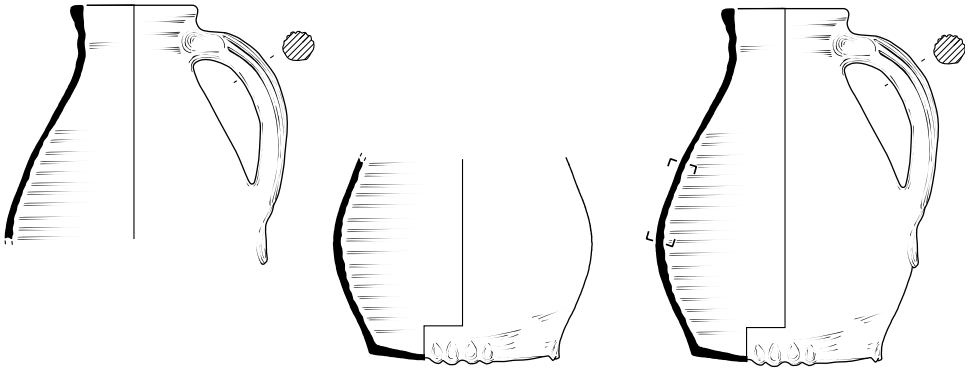


Fig 18: Pot drawing reconstructed from non-joining sherds of the same vessel: rim and handle (left) and base portions (centre) are drawn separately and a composite drawing (right) is then created by overlapping the two. Brackets on the section of the composite drawing indicate the extent of the overlap between the upper and lower portions

3.6 Finishing off

Next to the drawing, write any information you have about the sherd (site code, context number, type code, drawing number, etc.). This can be vitally important as pencil drawings may be stored for years before publication and a drawing with no information can be very difficult to track down later. Initials of the illustrator and the date drawn can be useful too. If you are drawing a number of sheets of pots for the same site or project, number the sheets and keep them in a folder together, and also keep a record of which sherds are drawn. It is probably a good idea to scan the pencil drawings at this stage, name the files with an easily-identifiable name, add any metadata to the files and store the scans in a labelled folder.

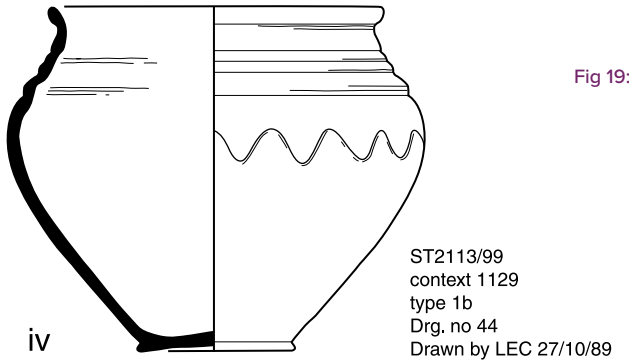


Fig 19: Finished drawing with its information recorded

4. Preparing pottery drawings for publication

There are several ways that pottery drawings can be prepared for incorporation into the final publication, which might fall into three broad categories – inked pages, digitally drawn pottery or a combination of the two in which hand-inked drawings are scanned and paged-up in a computer drawing package.

It is rare nowadays for pottery to be paged-up as it once was as sheets of full-sized inked drawings, and the latter two methods are far more likely to be practised in professional archaeology. However, if access to computer graphics packages is not available, drawings can be prepared by hand as follows.

4.1 Drawing in Ink

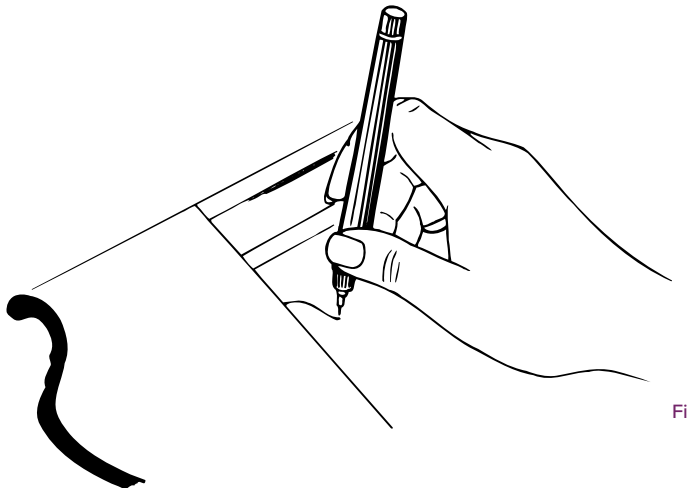


Fig 20: Inking in the drawing with a technical pen

If you are preparing a whole page or more of pottery illustrations, it is more efficient to ink up the pages at one go rather than inking each drawing individually and then mounting them up later, providing you know the image area of the publication and the order in which the drawings are to go. It is also more efficient to produce all the illustrations for one report to a single reduction, such as 50%. This will mean that pottery, for example, which conventionally is published at 1:4, can be inked up at half the actual size. Handmade or highly decorated pottery is often reproduced at 1:3 or even 1:2. Make sure you and your pottery specialist are aware of, and agree on, the final reproduction size before inking your drawings.

Begin by calculating the image area of your publication at the size required for reduction. (Most journals publish 'Notes for Contributors' which provide information on the publication size and how illustrations should be supplied.) If you have chosen 50% reduction, you will need a drawing area twice that of the final publication, and your pencil pot drawings will have to be reduced to 50% before inking in. If you reduce these on a photocopier, be aware that distortion will occur, often more in one direction than another. Bar scales drawn both horizontally and vertically on the original drawing can be used to check distortion.

Mount the reduced pencil drawings within the image area, making sure the rim lines are level and the centre lines vertical. (It helps if your drawing board has parallel motion.) Pages of pottery look a lot neater if the centre lines and rim lines are aligned, although this is not always possible when vessels are different sizes. In most cases the layout can be juggled so that it appears tidy and maximises the use of space available. A higgledy-piggledy arrangement can look very sloppy and be confusing. Once the page is arranged to your satisfaction, place a sheet of drafting film over it. This should be large enough to allow a 5–10cm handling margin all the way around the page. Mark the corners of the available image area with crop marks which do not intrude into the image area.

If your drawing board has parallel motion, you may find it quick and efficient to draw all the centre lines of a page of pottery at one go, then all the rim and base lines, etc. If working for 50% reduction, rim, base and profile can be drawn in 0.35mm thickness, the centre line in either 0.35 or 0.25. Any decoration and shading can then be added with finer lines.

The top rim line should not join the section – leave a small gap, so that the form of the section is clear and not obscured by the rim line. This also detaches the section from any internal detail or shading.

Finally, add numbers, usually to the bottom right or bottom centre of each pot. It is useful to add a drawn scale bar to the drawing, even if the scale is to be stated in the caption – caption writers and printers have been known to make mistakes. A drawn scale bar is even more essential if the drawing is to be reproduced in an online publication.

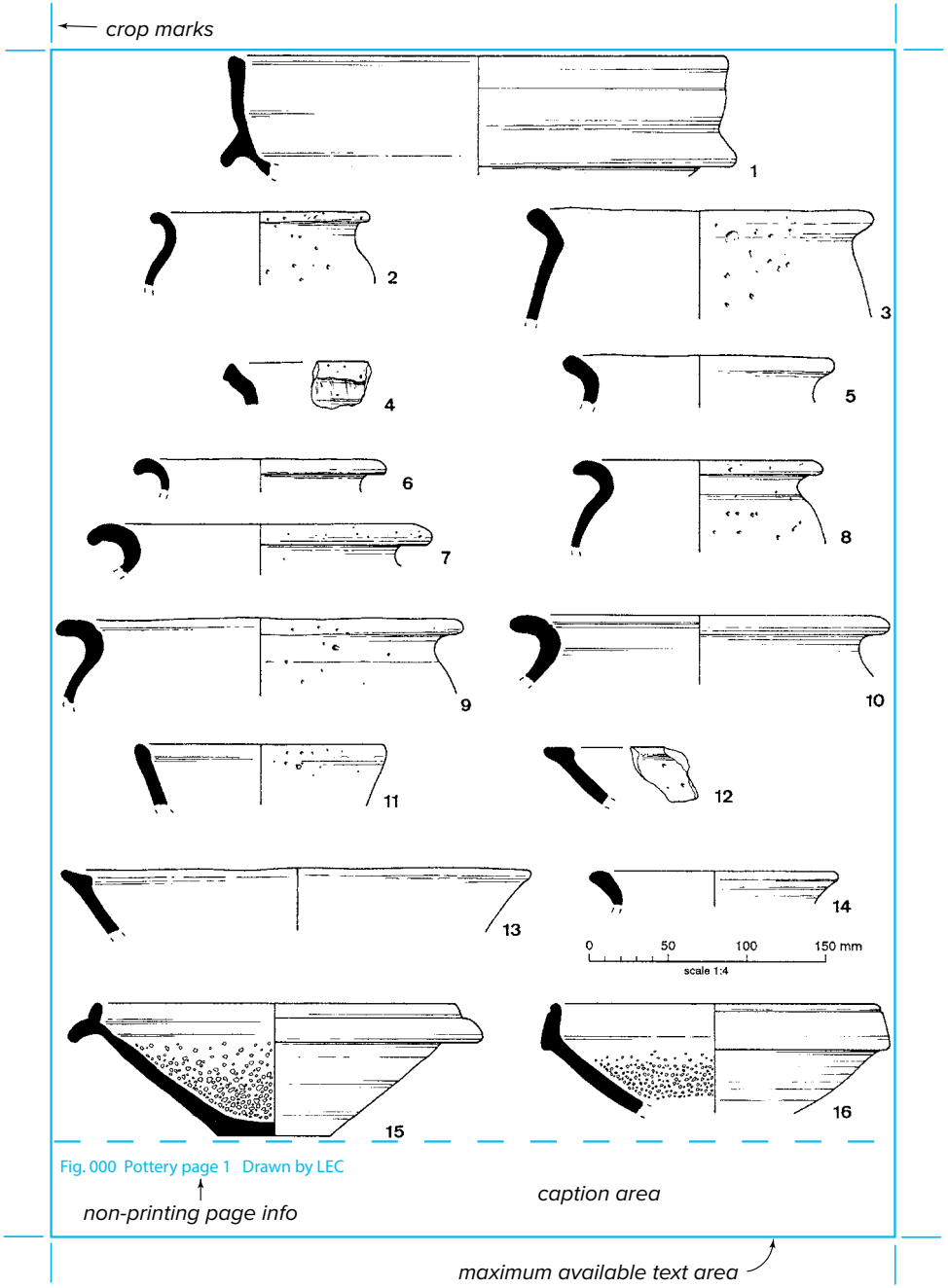


Fig 21: Pots paged-up for publication in a journal with a text area of 135 x 190mm. Crop marks indicate the maximum extent of the printed page. The drawing area before reduction was 270 x 380mm; the pots were drawn at 50% actual size to be reduced by a further 50% to the final publication scale of 1:4 (25%)

4.2 Pottery illustration using computer software

This section covers the preparation of pottery illustration to traditional print format. The software referred to here is Adobe Illustrator, although similar design packages may be used to produce illustrations using broadly similar methods.

Generally the basic drawing of the pot is produced in pencil as described above in part 3; large drawings can be reduced to 50% using a photocopier (usually adding two 50mm bar scales to the drawing in order to check scale) and then the reduced copy is scanned. This does not need to be a very high-resolution scan; a 200dpi greyscale jpeg will be adequate, as the scan is discarded after tracing. Remember that this drawing is now at 1:2, and still needs to be reduced to 1:4.

In Illustrator (or whichever drawing program is being used) open a new drawing and place the scanned pencil drawing on a layer – use guides to make sure centre and rim lines are vertical and horizontal respectively. Turn the scan layer into a template layer (ie turn off print options, dim and lock the layer).

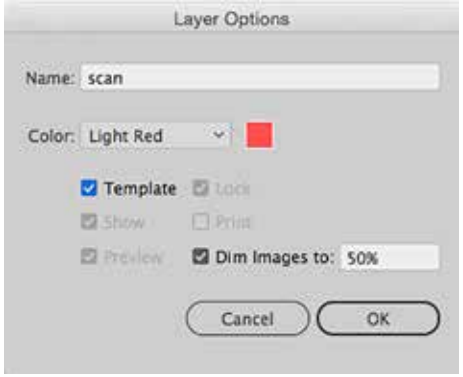


Fig 22: A new layer for the scanned pencil drawing has been created and made into a template layer (non-printing, dimmed)

Open another new layer to create the finished drawing on; using the **Pen** tool, draw over the horizontal rim line and centre line, and trace the left-hand profile (Fig 23).

A note on line thicknesses – try using 0.75pt for exterior outline, 0.6pt for centre line. Bear in mind that lines less than 0.5pt (c. 0.2mm) in thickness may not print adequately).

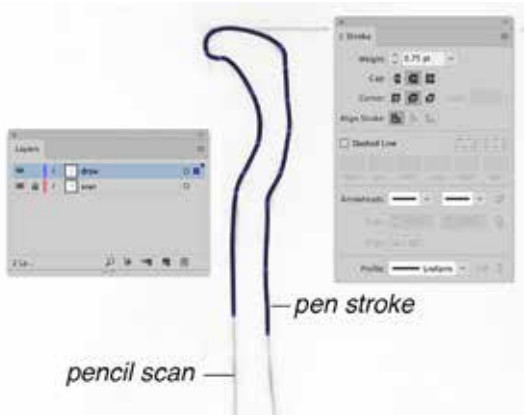


Fig 23: On another new layer, trace over the scan using the Pen tool

When complete, transfer the profile to the right-hand side using the **Reflect horizontal** and **Copy** utilities to create a mirror image; align the two profiles (Fig 24).

Remove the inner line from the right-hand profile and join it onto the top line: add a black fill to the left-hand profile (or hatch, if a handmade pot).

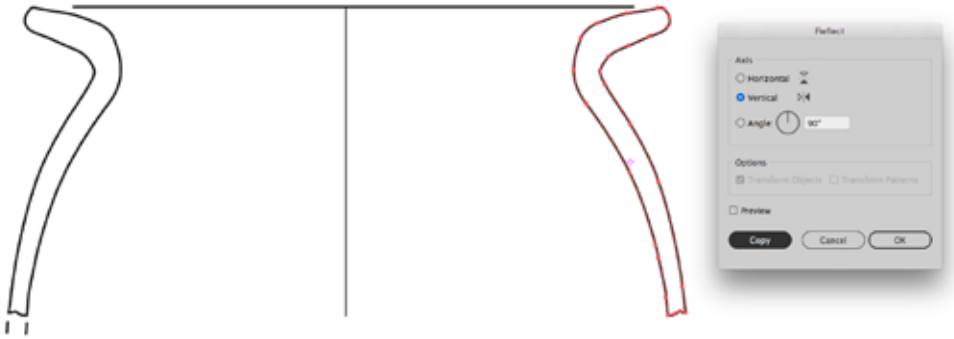


Fig 24: Top and centre lines drawn; the profile is drawn and flipped onto the opposite side using 'Reflect Vertical 90°' and 'Copy'

Decoration and rilling can be drawn using a selection of brushes, although this may be more time-consuming than drawing by hand in ink, and the results can be rather mechanical and artificial-looking. However, with digital illustrations a more flexible approach to pottery illustration is possible, and a number of alternative approaches may be explored, such as: inserting scans of hand-drawn detail (either pencil or ink) into the Illustrator drawing (Figs 25–26); exporting the Illustrator drawing into Photoshop and adding shading or colour detail, or inserting photographic or photomicrographic details of fabric and texture into the drawing in Illustrator (Figs 27–28).

Once each individual pot drawing is completed, the elements of the drawing may be grouped together as one object, making page layout much more straightforward. The completed page of pottery drawings can be saved as a pdf file to send to the pottery specialist, or as an eps or tiff file which can be inserted into the final report in a desktop publishing package.

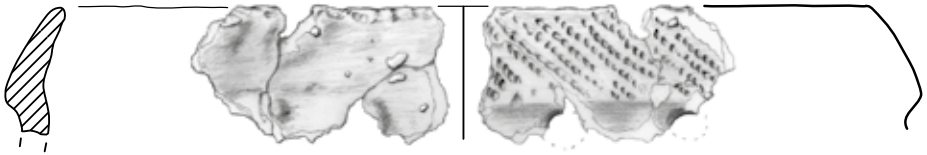


Fig 25: Example in which details of a body sherd have been rendered in pencil and scanned; the section and other information is then added in Adobe Illustrator

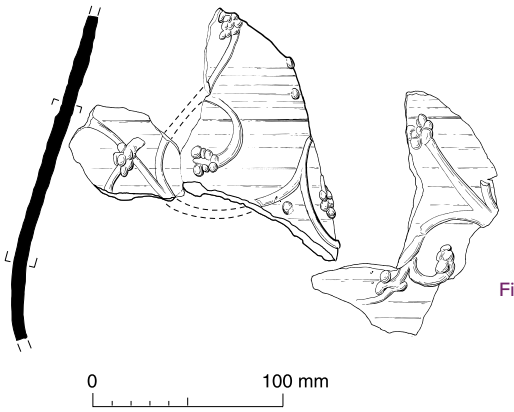


Fig 26: Scanned ink drawing (right-hand side of pot) incorporated into vector-drawn (left-hand side) image.

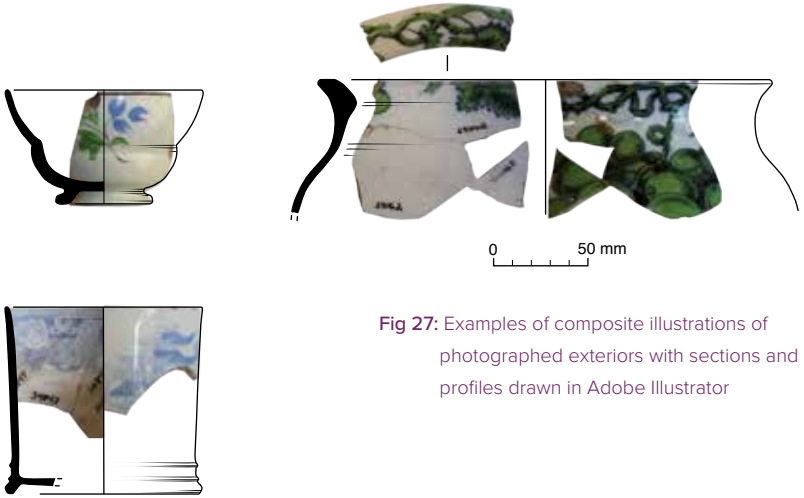


Fig 27: Examples of composite illustrations of photographed exteriors with sections and profiles drawn in Adobe Illustrator

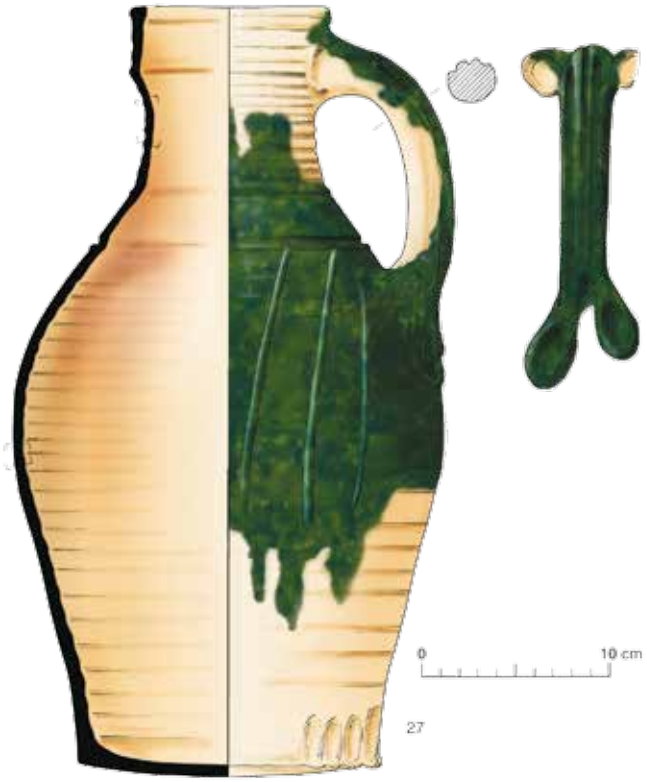


Fig 28: Jug drawn in Adobe Illustrator with colour effects added as separate layers; drawing exported to Adobe Photoshop; glaze sampled from scanned sherd and used to build up area of glaze on drawing

4.3 Scanning pots for page-up

Inked pot drawings may be scanned individually and imported into a computer graphics package such as Illustrator for layout and final publication; they should be scanned at quite high resolution (at least 300dpi) and the scanned images may need some cleaning-up before paging. Numbers, scales and other details can then be added. This form of layout is of course much more flexible than the old method of paging up, but as the drawings themselves are raster images they are less easy to edit and usually much larger files than if drawn as vector files.

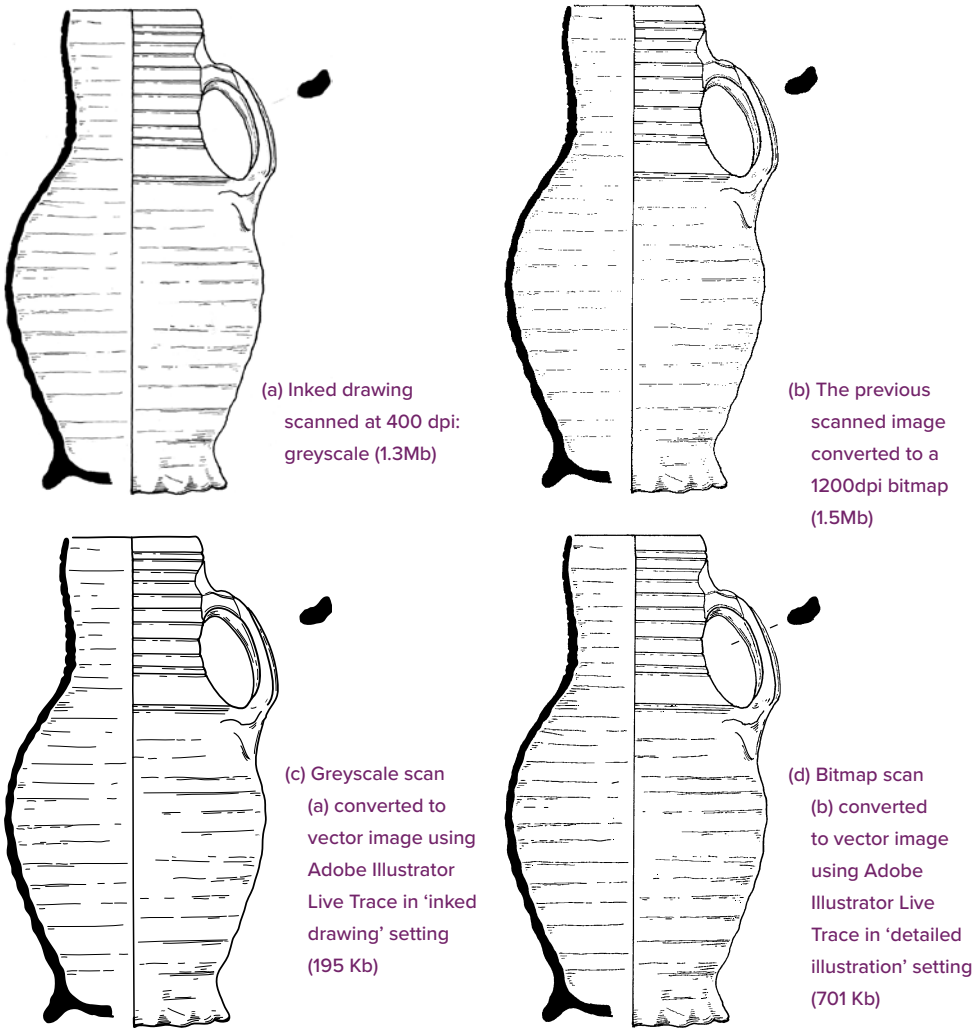


Fig 29: A comparison of scanned inked drawings in various file formats

4.4 Converting scanned images to vector images

It is also possible to scan inked pot drawings and convert them directly into vector drawings; the drawings below (Fig 30) represent a tiny sample of a very large number of drawings of medieval pots from various sites in York, which had been drawn in the mid-1980s in ink on CS10 (a heavy opaque paper). In order to prepare them for incorporation in a digital publication, the drawings were scanned and converted to vector graphics using Adobe Streamline, and page layouts were then made up in Adobe Illustrator. More recent releases of Adobe Illustrator incorporate a Live Trace utility which replaces the function of Streamline.

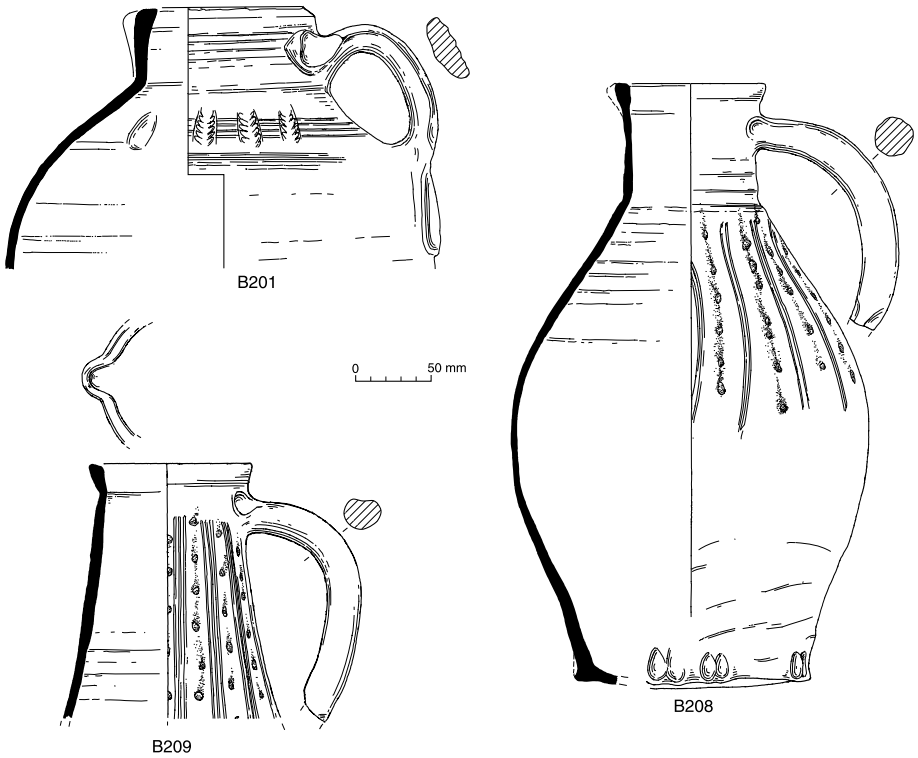


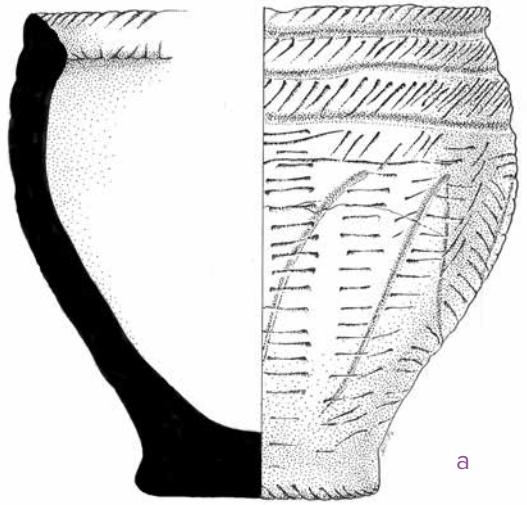
Fig 30: Pottery from the Bedern, York; originals drawn in ink on paper in the 1980s were scanned and converted to vector images before being paged-up in Adobe Illustrator. (York Archaeological Trust)

5. Special cases

5.1 Fabric and texture

Shading conventions for pottery are the same as for other artefacts: the light is shown coming from the top left. Shading is not generally shown on wheel-thrown pottery or anything which is to be reduced by more than a half although occasionally 'rilling' or throwing lines may be shown by parallel horizontal lines, and such surface treatment as slip or glaze may be indicated by stipple or some other convention.

Stipple is generally used for showing coarseware texture but line or line and stipple can also be effective. Burnishing can be shown by fine horizontal lines (Fig 31b). Other details such as inclusions, cracks and scratches may also be shown but bear in mind that too much detail may clutter up a drawing unneccessarily, or be lost or black in on reproduction.



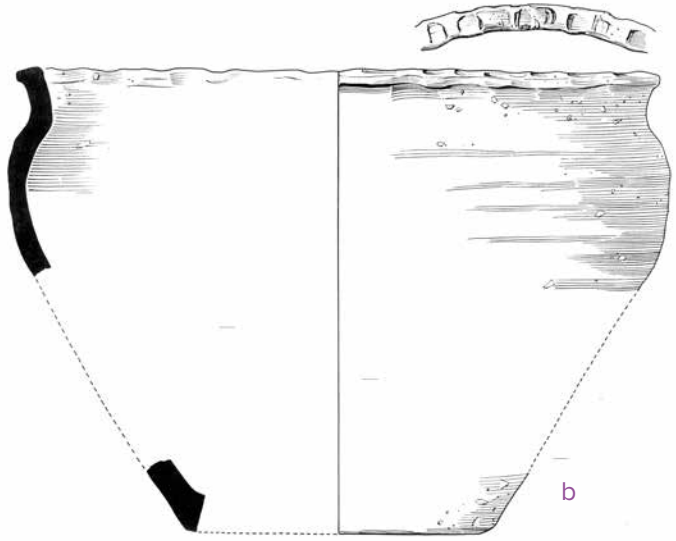


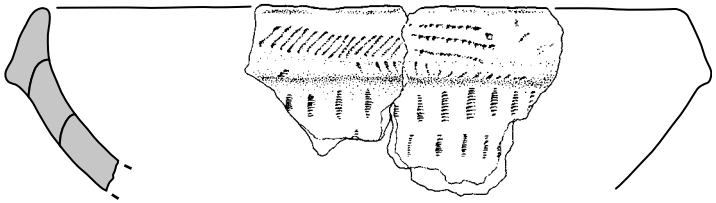
Fig 31: Stipple (a) is generally used for coarse fabric, while burnishing (b) can be depicted using horizontal lines; however this should be avoided if decoration is present. Lines are also used to represent knife-trimming and similar effects

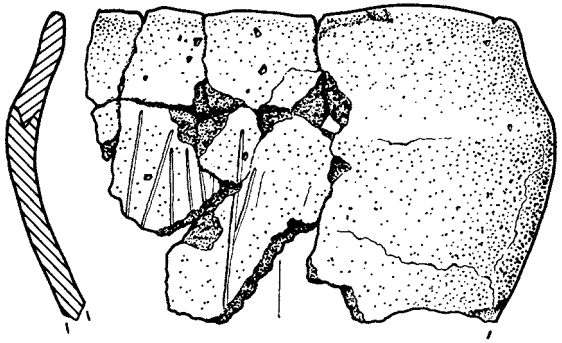
5.2 Technology

Wheel-thrown/handmade pottery

Horizontal lines on wheel-thrown pots (eg rim and base lines, collars) are generally drawn with a ruler, whereas handmade pottery is always drawn freehand. Some people prefer the sections of wheel-thrown pots to be solid black and handmade pottery hatched.

Sections can be filled in with black, stipple or hatching and combined to show details of manufacture such as applied handles and decorative cordons. Thumbing and surface treatment can be indicated on handmade or hand-finished pots. Different methods of showing coil manufacture are illustrated (Fig 32).





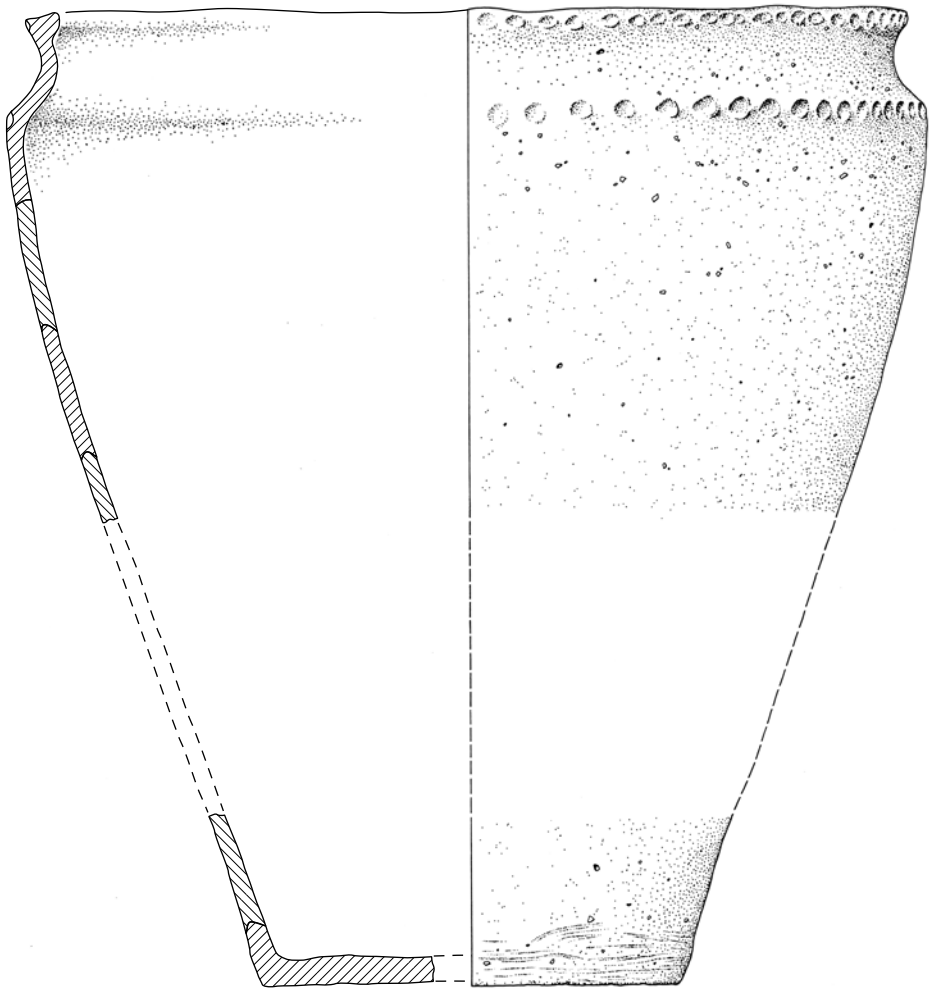
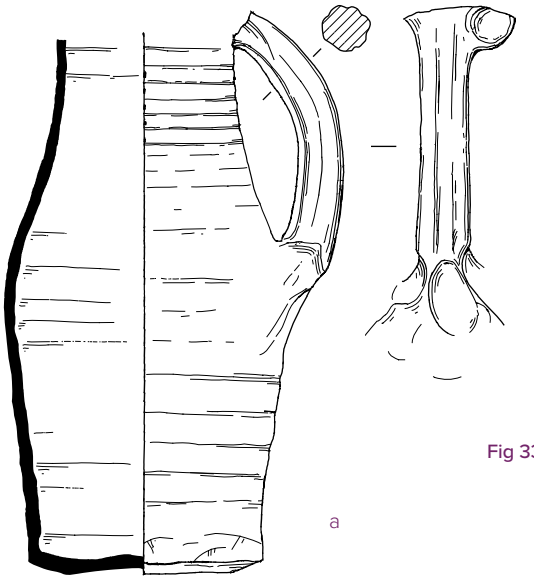


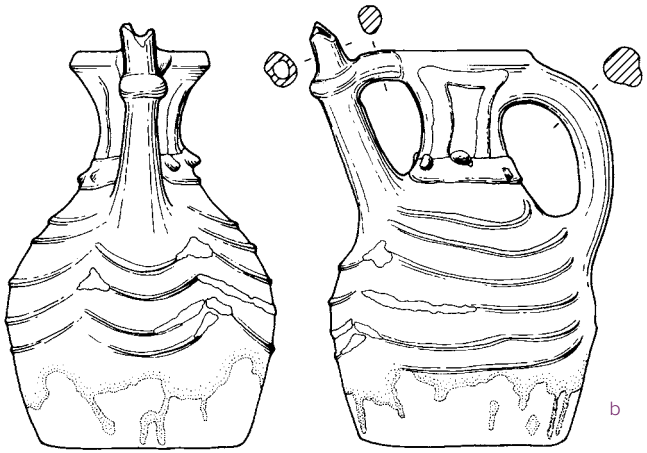
Fig 32 (above and facing): Coil-built pots; where coils can be distinguished, they can be indicated in the section using one of these conventions

5.3 Handles, spouts and lugs

Handles or lugs are usually shown to the right, spouts to the left (Fig 33). When one handle is present, it is shown on the right with a cross-section and elevation if necessary. If there are two or more handles they can be shown in elevation on the right and in section with details of the construction on the left. Spouts and lips are shown either on the left in section for jugs or in elevation on the centre line in the case of mortaria (Fig 33c; Fig 34; Fig 44).

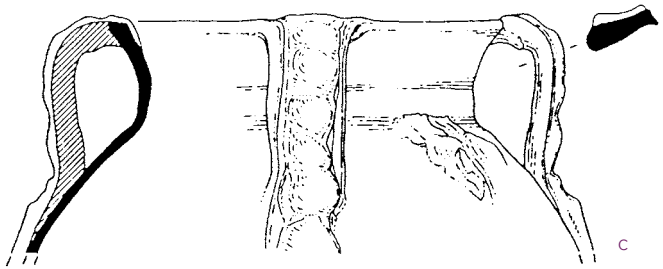


a

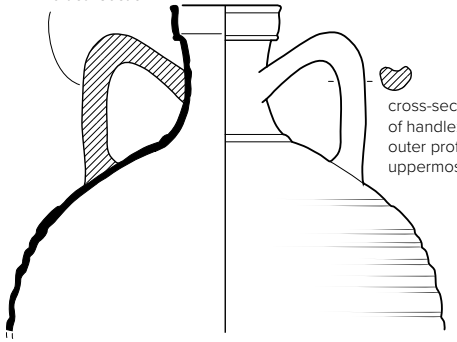


b

Fig 33: Various methods of depicting handles



c



d

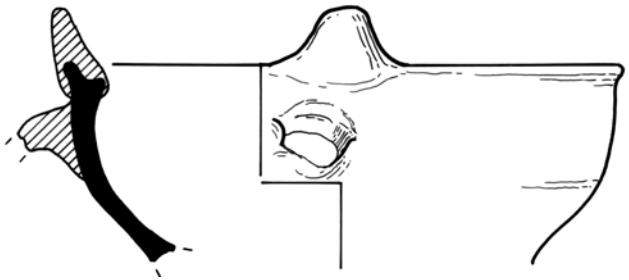
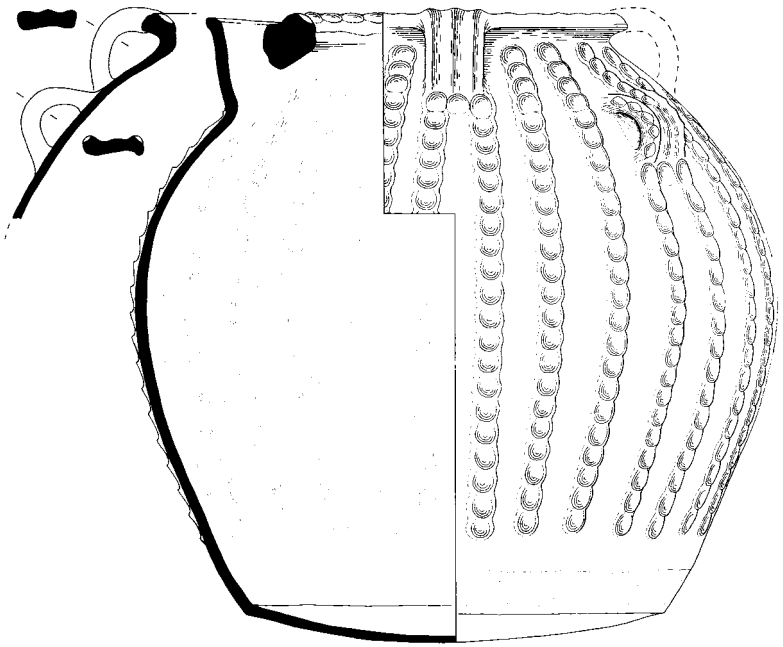
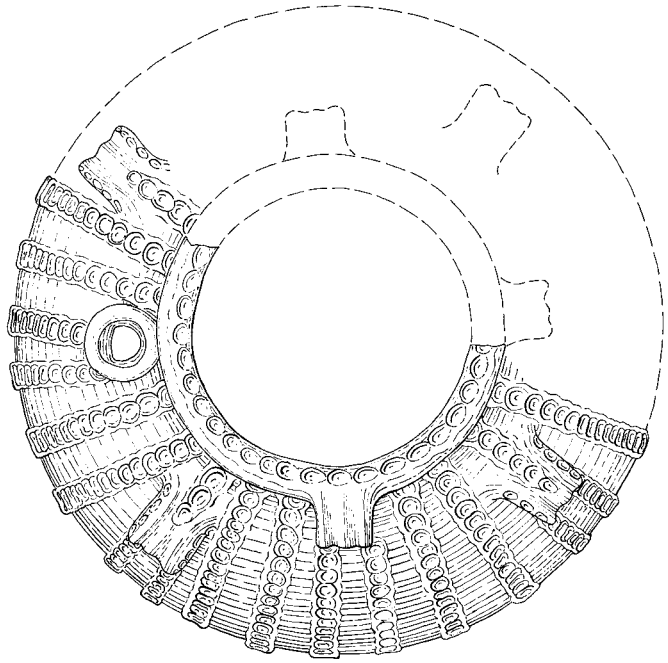


Fig 34: The rim projection and handle in this chafing dish are shown in section on the left-hand side of the pot and in elevation and plan in the centre of the drawing to minimise distortion. The intention is to show the maximum information, rather than implying that there are two handles at 90º to each other, although the drawing may give that impression





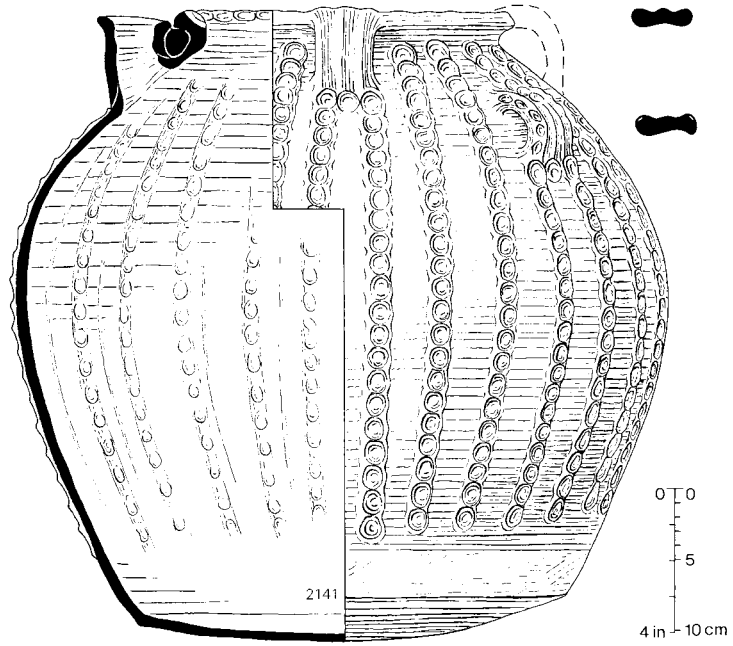


Fig 35: In the case of this Torksey ware pitcher, the illustrator had to consider how to illustrate the numerous handles (three around the rim and four on the vessel's shoulder). The unpublished first draft (above) attempts to show both sets of handles on the one section, and becomes very confusing. In the final published version (left) the illustrator decided that a plan view was necessary to show the handle locations. (York Archaeological Trust)

5.4 Complex forms

Several views may be necessary to show unusual forms such as this 'Green Man' jug from Eynsham Abbey below (Fig 36) or the zoomorphic vessel (facing page, Fig 37).

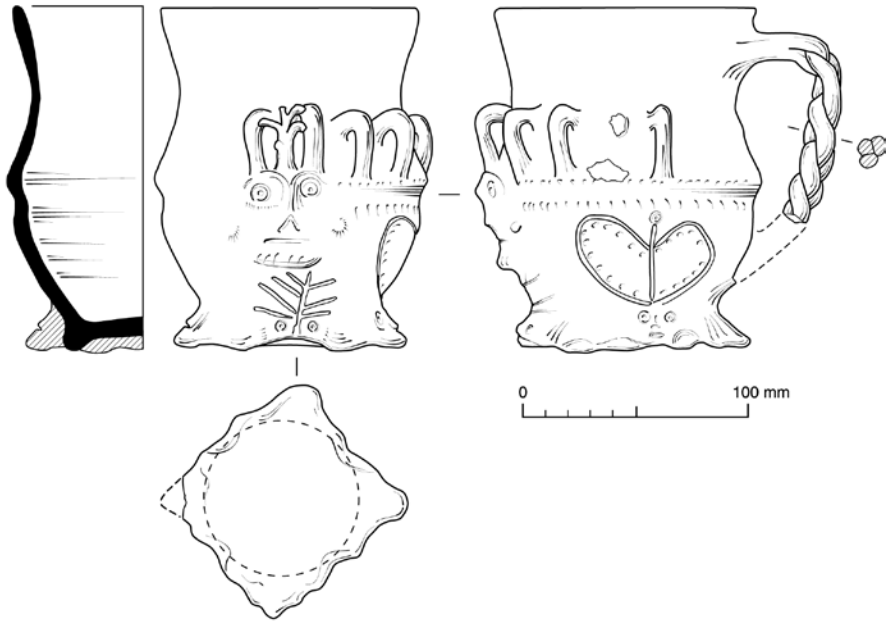


Fig 36: The decoration and form of this jug required a front and side view. Although the vessel is circular at the rim the base has added feet which give it a square form; these were shown in a basal plan view. (Oxford Archaeology)

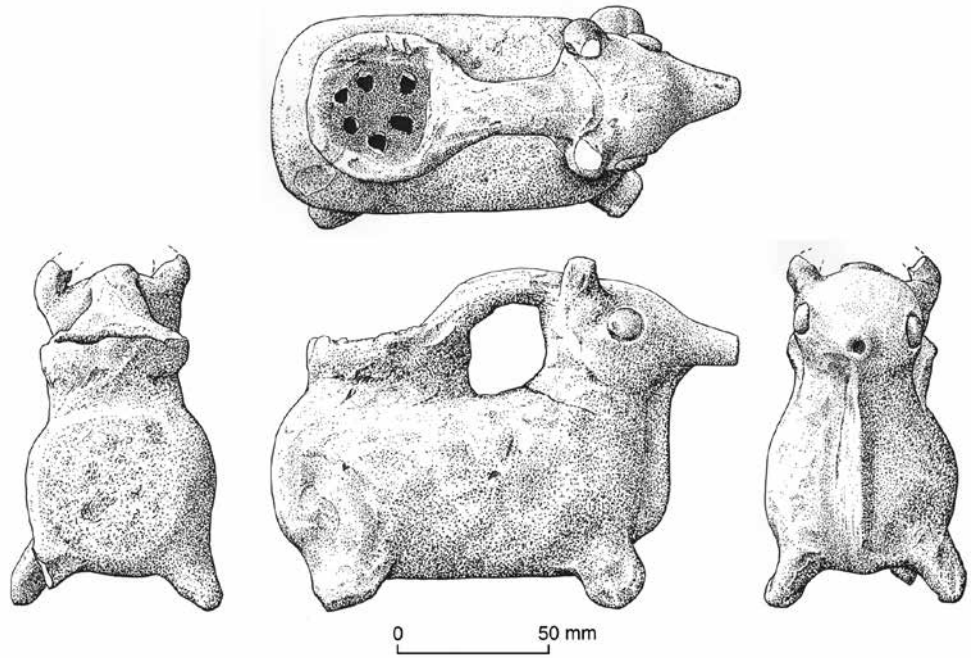


Fig 37: Zoomorphic vessel from Jordan: multiple elevation and plan views are combined to show the complex form of this object. (Ann Searight/British Museum)

5.5 Plan views

Plan views may be needed occasionally to show details such as handles, spouts, lips, rim decoration or internal decoration (Fig 38, 39).

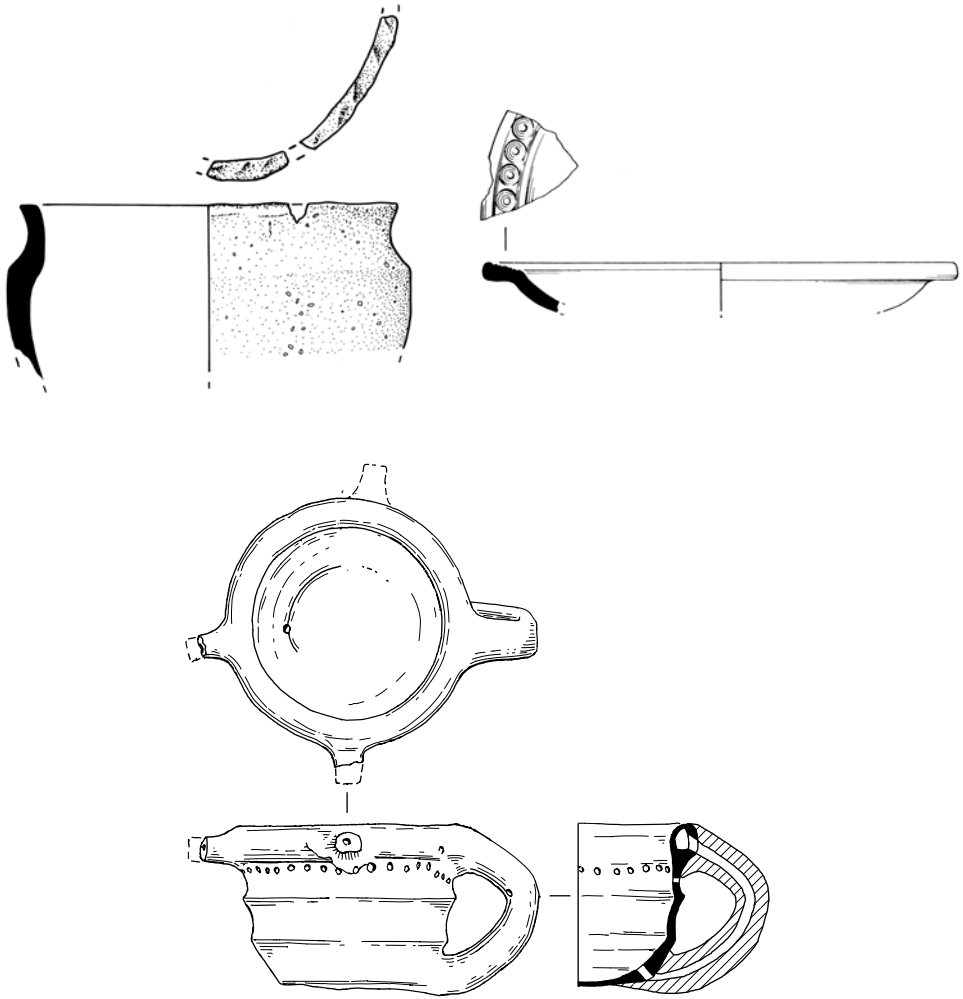


Fig 38: Rim decoration can be drawn as a plan view above the pot – this can also be used to show any other special features of the rim, such as location of handles and spouts.

Fig 39: Slipware dish and tin-glazed earthenware plate drawn in plan view to allow decoration to be shown.

5.6 Decoration

Decoration around the body of the pot may be shown 'unrolled' to the right or, if the decoration is quite simple and repetitive, drawn out on the curve of the pot.

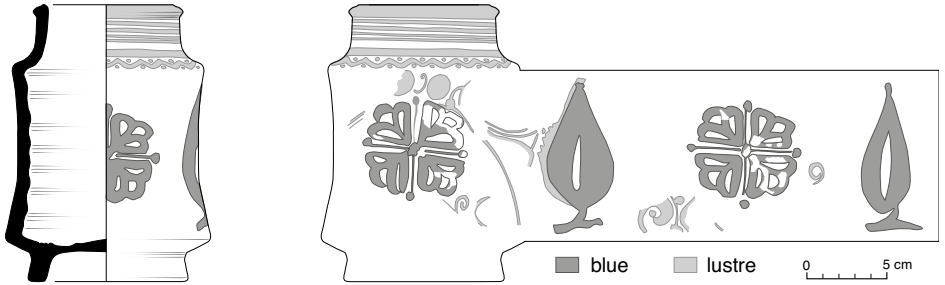


Fig 40: Decoration around the circumference of vessels shown rolled out

Incised decoration is shown by using two lines of different thickness to indicate shadow (Fig 41).

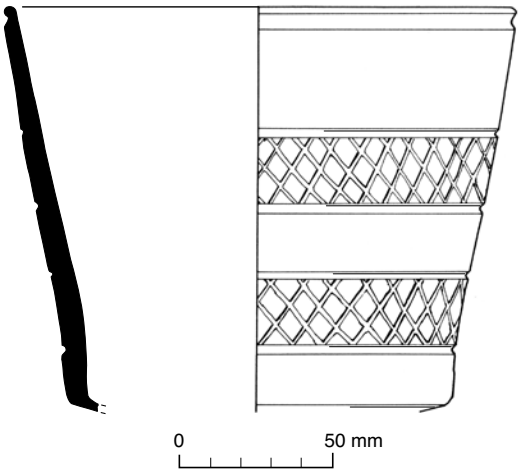


Fig 41: Incised decoration

Slip coating can be indicated by areas of light stipple: alternatively slip decoration such as the Metropolitan slipware below can be shown as white on a black body.

Fig 42: Metropolitan slipware

Coloured paint or glazes can be shown either as a colour plate or by use of a monochrome convention:

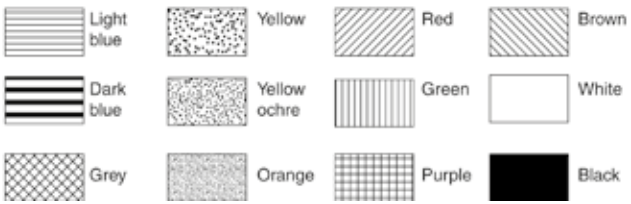
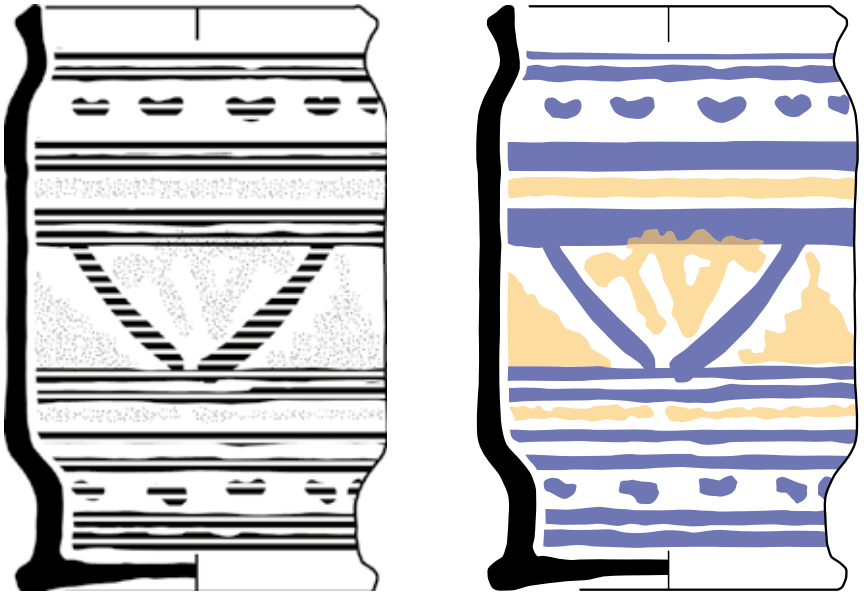


Fig 43: (above) Conventions suggested by English Heritage for the depiction of colour glazes in monochrome publications; (below) Tin-glazed earthenware drug jar shown using colour conventions for monochrome printing (left) and with an approximation of the original colours (right)



5.7 Stamps

Stamp decoration, for example on handmade Anglo-Saxon pottery – in these examples the stamp impressions themselves are drawn at twice actual size and shown at actual size (1:1) next to the pot (here at 1:2).

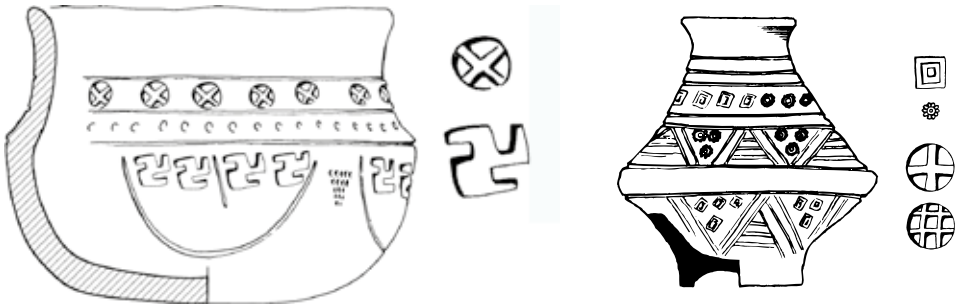
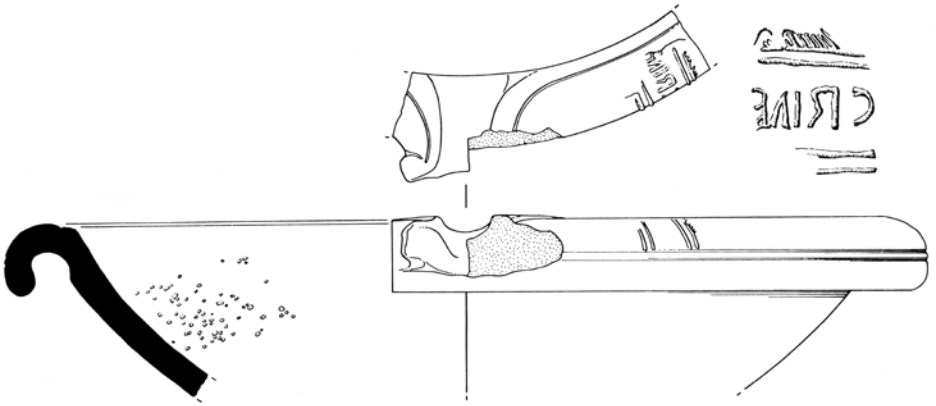


Fig 44: Stamps on Saxon pottery and (below) maker's stamp on a mortarium rim shown unrolled and at double scale



5.8 Samian

Undecorated Samian vessels can be drawn using the same techniques as for other pottery. Decorated vessels and stamps may be recorded by means of tracing with a technical pen onto clear film, by photography, by taking casts, by 3D laser scanning, or by taking rubbings using fine tissue paper and flaked graphite. The latter technique is favoured by many Samian specialists, as it is relatively cheap and quick, yet accurate. The rubbings can be scanned and reproduced as greyscale images. (See Biddulph, 2015, for discussions and demonstrations of techniques for illustrating Samian).

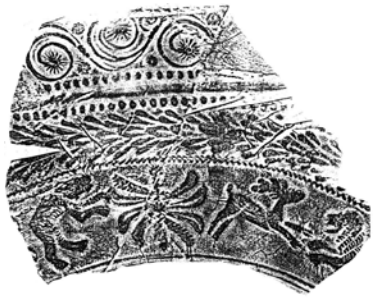


Fig 45: Rubbing of a decorated Samian sherd. Care must be taken to obtain all the detail, while avoiding smudging or creasing in the tissue paper, and it is important to make sure the scale and resolution of the scanned image are recorded

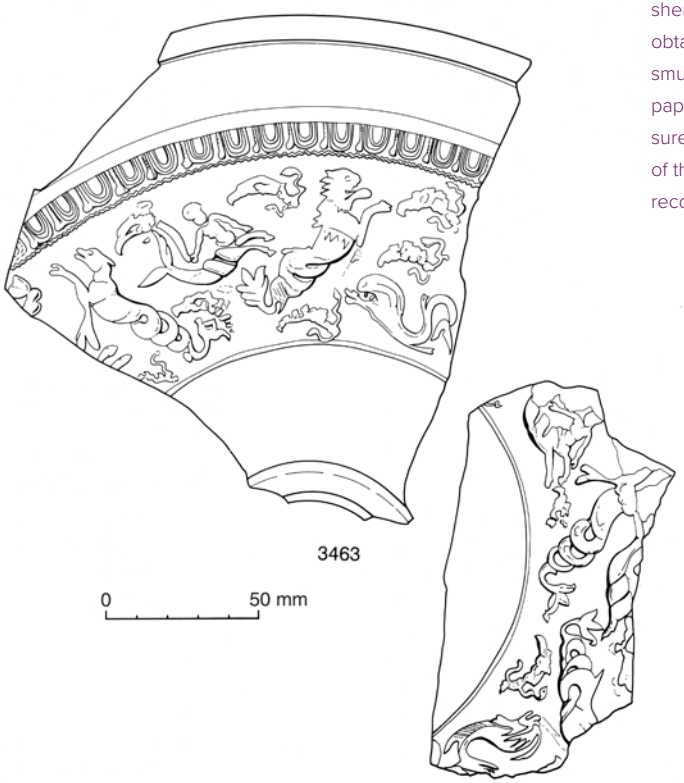


Fig 46: Decorated Samian bowl: the decoration is shown flattened onto a plan view. (York Archaeological Trust)

Fig. 47: Makers' stamps on Samian vessels; drawn at twice actual size for reproduction at 1:1

One of the disadvantages of both conventional drawings and the rubbing method is the difficulty of presenting a three-dimensional shape on a two-dimensional plane; a complete or near-complete vessel must necessarily be distorted in some way by being flattened to reproduce on the page.

A technique which may be useful for recording accurate details of three-dimensional forms such as decorated samian, and indeed any pottery, has gained huge popularity over the last few years. 3D photogrammetry or 'Structure from Motion' (SfM) involves the creation of three-dimensional images from a series of two-dimensional photographs, by matching features in multiple overlapping images to create a point cloud. There are some disadvantages: the software can be expensive (though much cheaper than 3D laser scanning); a surprisingly large number of overlapping digital photographs can be required for best results; a powerful computer is required to process the images; and a reliable means of disseminating and archiving the 3D images remains to be found (at present most seem to be posted on the Sketchfab website). A full description of the techniques of SfM are beyond the scope of this basic introduction, but it is hoped the Graphic Archaeology Group will address this in a further Professional Practice Paper.

Bibliography

Drawing pottery

Adkins, L. and R., 1989: *Archaeological Illustration* Cambridge Manuals in Archaeology. Cambridge: Cambridge University Press

Biddulph, E. (ed), 2015: *Illustrating Samian Ware*. Study Group for Roman Pottery http://romanpotterystudy.org/new/wp-content/uploads/2015/05/Illustrating_Samian_Ware.pdf 15 August 2017

Brodribb, A.C.C., 1971: *Drawing Archaeological Finds for Publication*. London: John Baker/New York: Association Press

Goddard, S., Knight, D. & Goddard, J., Hamilton, S. and Rouillard, S.,1997: *Aspects of Illustration: Prehistoric Pottery*. AAI&S Technical Paper 13

Green, C., 1980: *Drawing ancient pottery for publication*. AAI&S Technical Paper 3

Griffiths, N., Jenner, A. and Wilson, C., 1990: *Drawing Archaeological Finds: A Handbook*. London:Archetype Publications

Grinsell, L., Rahtz, P. and Price Williams, D., 1974: *The Preparation of Archaeological Reports*. London: John Baker

Hamilton, S., 1996: Reassessing archaeological illustrations: breaking the mould. *Graphic Archaeology* 1996, 20–26

McCormick, A.G., 1977: 'A Guide to Archaeological Drawing', Notes for Students, Department of Archaeology, University of Leicester

Philo, C. and Swann, A., 1992: *Preparation of Artwork for Publication*. Joint AAI&S/IFA Technical Paper 10 http://gag-cifa.org/wp-content/uploads/paper4.pdf 15 August 2017

Piggott, S. (1965). Archaeological Draughtsmanship: Principles and Practice Part I: Principles and Retrospect. *Antiquity*, 39(155), 165-176. doi:10.1017/S0003598X00031823 15 August 2017

Williams, D., 1993: A dilemma in brackets, (on conventions in pottery illustration). *Graphic Archaeology* 1993, 16–18

Pottery - general

Elsdon, S.M., 1989: *Later Prehistoric Pottery in England and Wales.* Shire Archaeology

Gibson, A., 1986: *Neolithic and Early Bronze Age Pottery.* Shire Archaeology

Haslam, J., 1978: *Medieval Pottery*. Shire Archaeology

Jennings, S., 1981: *Eighteen Centuries of Pottery from Norwich*. East Anglian Archaeology 13

McCarthy, M.R. and Brooks, C.M., 1988: *Medieval Pottery in Britain AD900–1600*. Leicester University Press

Swan, V.G., 1988: *Pottery in Roman Britain*. Shire Archaeology

Murray, J.D and Thompson, P. with Cowan, C., 2002: *Settlement in Roman Southwark*. MOLAS monograph 12

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