Shining new light on Roman London

Project handbook and recording guide for a Museum of London/MOLA project funded by City of London Archaeological Trust

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Section 1: Introduction

This is a guide to the description and classification of Roman ceramic lamps from London, designed to help participants in the Shining New Light on Roman London project to understand the function, typology and technology of ceramic oil lamps and some key issues relating to their use. This project was made possible by a generous grant from the City of London Archaeological Trust. The project was part of the Museum of London Archaeological Archive’s volunteer programme ‘Opening Up to Archaeology’, funded by Arts Council England (ACE). The lamps discussed and illustrated throughout are those in the collections of the Museum of London who retain copyright of all images produced during the SNLORL project.

As there are more than 1000 lamps from the city, it is important that each person recording the lamps makes accurate, consistent and comparable records. These records can then come together to contribute fully to research on the use of artificial light in the Roman period. The guide is designed to facilitate consistent recording during the project and it is hoped that it will also prove a useful resource for those recording lamps from the city in the future.

The approach to recording is a tailored version of that used at Museum of London Archaeology (MOLA) which was developed specifically for the project. We are grateful to Hella Eckardt, University of Reading for useful advice and feedback during this process. It has been expanded and improved during the life of the project in response to the ideas of project members and comments, suggestions and criticisms are all still welcome. Let us know if you think anything is unclear, if you think we are missing something important or if you can think of a better way to describe something.

Reading sections 2 to 4 will provide you with an understanding of the most common types of lamp found in the city and an introduction to our present state of knowledge about lamp use and supply. Section 5 poses some initial questions that you may want to keep in mind when examining lamps, notes some results emerging from the first stage of the project and highlights the sorts of patterns that we will be able to explore in the future using project data.

Section 6 explains how to catalogue a lamp, laying out our system for describing lamps in detail. This aims to be clear and meet the requirements of both the research project and the Museum of London’s Collections Online resource. The terminology/language and approach to recording required by the project are discussed further by lamp part in the quick reference appendices with extensive reference images. You may wish to print these out separately to have them on hand during cataloguing.
Section 2: An overview of the elements of a lamp

Most ceramic oil lamps can be understood as having two or three major parts (Figure 1). The most ubiquitous is the **body**, usually circular, which serves as a container for the fuel. Projecting from the body there is usually a **nozzle**. This feature is present on most types of lamp and occasionally there is more than one nozzle. Nozzles serve to hold the wick(s) and are where the flame normally burns, often leaving a sooty residue. A few types of open lamps do not have nozzles. Many lamps, but by no means all, also have a **handle**. This feature allows them to be picked up and transported with greater ease and without the need to touch the nozzle or body, areas which can become hot or oily during use.

These different parts are comprised of several different elements, labelled in Figure 2 and Figure 3, some of which have functional or stylistic/decorative significance and which can help us to date, classify and analyse lamps. It is important to describe these comprehensively and consistently in order to allow each lamp to be placed into its correct typological and social context. The different elements are listed and then discussed in turn below where their significance and the major variants of each are discussed.

*Figure 1: The major parts of a lamp. © Museum of London*
Figure 2: Naming the parts of a closed lamp. Diagram above after Eckardt 2011 with additions (used with permission). Lamp photographs © Museum of London
Figure 3: Naming the parts of open lamps. Above: the features of type 11 open lamps. Middle: Features found on type 11 variants (11a DEC left and 11b right). Bottom: rarer open lamp forms (type 13 left and type 14 right). Lamp photographs © Museum of London. Lamp cross-section illustration © MOLA.
**Section 3: Lamp form, function, typology and chronology**

*The use of lamps in Roman London*

The use of oil lamps to produce artificial light was extremely common in the Mediterranean world during antiquity. Lamps made evening and night-time activities possible that could not take place in darkness, including a variety of writing, craftwork and leisure activities.

They represent a very different form of artificial light to the domestic hearth, being more portable and, if used in multiples, more easily divisible. This might allow for a more diffuse method of lighting and may have made it easier for individuals to carry out activities in different parts of a room, or different parts of a building, each with their own personal source of light. For this reason they are probably better suited to Roman architectural styles, based around rectilinear buildings with multiple rooms, than the British roundhouse tradition where a single hearth often provided the key source of night time illumination light for a whole building.

In Britain, lamps were not introduced until the time of the Claudian invasion of southern England in AD 43. The first users of ceramic oil lamps on these shores were Roman soldiers and other immigrants who brought the habit, and the equipment, with them from across the channel. Even in ‘Roman’ Britain lamp use was not particularly common and was mostly restricted to sites such as forts and large urban centres where Continental influence was at its highest. This may reflect consumer choice, and thus marked differences in lifestyles between these sites and the countryside. However, supply-side issues such as access to lamps and imported fuels like olive oil may also be a factor. Lamp use never achieved widespread popularity and, in most areas, lamp consumption declined markedly after the 1st century AD (Eckardt 2002; Eckardt 2011).

Londinium, with its close cultural links to the continent and easy access to imported commodities, seems to have been one of the biggest consumers of lamps in the province. It also became an important centre for lamp production (see sections 4 and 5). There are also some hints that lamp use lasted longer in London than in many other parts of Britain but the dating evidence needs to be collated to test this idea. Eckardt (2002) used a sample of lamps from the city to explore the scale, distribution and character of lamp use. Her work suggested that early picture lamps were more common in the eastern part of the city while other forms dominated elsewhere. These patterns need to be tested and clarified, especially given that much of her data did not come from modern excavations.
She also discussed some of the distinctive local types which came to dominate lamp consumption in London including open lamps in Verulamium Region White Ware and factory lamps in London mica-dusted wares. These locally-made open lamps and factory lamps sometimes differ from continental prototypes and more work is required to fully understand these differences and their implications for local lamp use. Are they simply the products of less proficient potters or are they deliberately different variants suited for different consumers and local needs?

**Form and function**

By examining the form of lamps we can determine their date and explore the way that they were used. Lamp typology is a large and complicated subject. As such this guide to the classification and dating of lamps will be restricted to the types commonly found in London. More comprehensive treatment of the range of lamps found in Britain can be found in Eckardt (2002) and Bailey (1988).

The types of Roman ceramic lamp commonly found in London can usefully be divided into two basic functional groups. **Closed lamps** have a covered top with perforations for the wick and to allow liquid fuel and air to enter. **Open lamps** have an open top. Some may have burnt liquid fuels but lamps of this type may have also burnt solid fuels such as tallow (Eckardt 2002, 232; Croom 2011, 78–83).

**Lamp size**, and thus maximum capacity, may also tell us about fuel consumption as it will be related to the length of time that a lamp could burn before needing to be refilled. This might provide some hints about the kinds of night-time activities they were meant to facilitate. Size, along with the provision of **handles**, is also related to portability. Most ceramic lamps are of a size that could be easily carried, but large long-burning lamps with no handle are perhaps more likely to have been fixed lights than smaller lamps with handles, which are more likely to be portable and used for shorter durations in a variety of places. **Number of nozzles** is another interesting attribute from a functional perspective. Most lamps have only one nozzle but some have more. Having multiple lit wicks would provide more light but would also consume fuel faster.
Typology: lamp groups and lamp types

The discussion of issues such as chronology and function require a standardised way of classifying and describing lamps. This is called a typology. Classification involves grouping and comparing objects on the basis of their similarities and differences, so it will always be slightly subjective. One of the biggest challenges is deciding how specific your typology should be in order to help you group objects which had similar functions or dates, while also distinguishing any significant variation. Another problem is how to classify small pieces when you cannot see all of the features of the original object. In order to get around these problems we will be using a two-stage classification. This divides lamps initially into broad lamp groups which are quite easy to identify using small fragments and then more specifically into lamp types within these groups based on other criteria.

Lamp groups

The first stage is to subdivide lamps into broadly defined categories which we have called lamp groups. These groups respect the broad morphological and functional distinction between open lamps and closed lamps discussed above. It is useful to further sub-divide closed lamps into two groups which are chronologically and visually quite different to one another. These are picture lamps (predominantly of 1st century date but surviving into the early 2nd century) and factory lamps (predominantly of later 1st and 2nd century date but surviving into the 3rd century). A few other types of closed lamps are known from London but these make up less than 2.5% of the total number of lamps known from the city. Detailed discussion of such types here is not possible and if you encounter any of these during the project let a member of project staff know. You will want to refer to Eckardt (2002) or to the British museum catalogues to classify such oddities.

Figure 4: Some preliminary chronological modelling of the three major lamp groups in London showing frequency density of different types across the Roman period. Dates in years AD along the bottom axis. Photos © Museum of London. Data provided by MOLA
This leaves us with three groups into which most lamps fragments can be placed:

1. **Picture lamps**
   These have a wide variety of nozzles but none have the distinct style of nozzle channel typical of factory lamps. They can have flat or rounded shoulders (see shoulder types A and B in appendix 2) normally with a concentric circle border on the interior edge before a concave discus. This group includes types 1, 4, 5 and 8 below and other types not covered in this guide which are either rare or absent from Britain.

2. **Factory lamps**
   These have rounded nozzles and normally have a distinct nozzle channel in between the wick hole and the discus. The shoulder is very distinctive, externally bevelled with a raised rim and shoulder lugs. The discus is flat and recessed. The base varies in design but the most diagnostic form has a maker’s name and a border of multiple concentric circles. This group includes types 9 and 10 below, as well as a range of multi-nozzled forms and local variants.

3. **Open lamps**
   These have open tops and come in a range of forms. Most examples in this group fall into type 11. These have a basic figure of eight shape, with sub-types defined principally on the basis of variations in the base and handle. Other types, 12, 13 and 14 are also known but are less common.

If you find a lamp which doesn’t appear to be a picture lamp, a factory lamp or an open lamp let a member of project staff know. Some additional forms of closed lamps have been found in London in very small numbers. You can read more about these in *Illuminating Roman Britain* (Eckardt 2002) and in the BM catalogues (Bailey 19880; Bailey 1988) (Figure 5).

**Lamp types**
Roman lamps are very varied and even within the groups defined above there is quite a lot of typological variation which can give us further clues about the date, source or function of individual lamps (Figure 5). Subdivision of lamp groups into lamp types is based on various specific features. Many different scholars have come up with their own classification systems for lamps but it is not our intention to create an entirely new classification here. Instead, our approach will aim to be comparable with work on lamps from across Roman Britain by Dr Hella Eckardt (2002). She based her study upon Loeschcke’s (1919) classification of the very large assemblage of lamps from the Swiss site of Vindonissa and we are also using his types here even though not all of them are found in London. Those which do commonly occur are illustrated in Figure 5.
Figure 5: Overview of London Roman lamp groups and lamp types. Numbered types are those defined by Loeschcke (1919) with some minor additions to cover hybrid or local forms. Photos © Museum of London. Type 14 cross section drawing © MOLA
For most closed lamp types the shape of the nozzle is the major identifying feature. Handles are not normally used as the basis for typology as most types appear in variants with and without handles. If the nozzle is present you should try and identify the lamp type with reference to the type descriptions and images in this chapter, the overall typology diagram (Figure 5) and the detailed photographs of nozzle types in appendix 1. Some kinds of lamps can be even further divided into subtypes on the basis of variation in nozzle shape or other criteria and this is noted below where appropriate.

You may encounter two types of factory lamps that are highly variable and thus do not fit neatly into the scheme laid out in Figure 5. The types are locally made factory lamp variants, normally in mica-dusted fabrics, which come in a wide variety of relatively crude forms. Most of these are variants of type 9 lamps but some do not fit neatly into this classification. More work is required to define meaningful sub-groups so for the present these should be defined as Local 9 if they closely resemble type 9 factory lamps or just local otherwise. We will return to these at the end of the project. The second highly variable group of factory lamps are those with multiple nozzles. Again these should just be defined as multi-nozzled. Examples of descriptions for some of the more common variants of both types can be found in appendix 1 and these can be adjusted as necessary to match other forms that you encounter.
Closed lamps types

Picture lamps

Type 1

- Picture lamp with lozenge-shaped/angular nozzle with volute mouldings (see also Figure 31). These normally have a narrow shoulder with concentric grooves (see Figure 58) but later examples have wider shoulders. Handles are quite rare and can be mould-made but are more typically applied.

- Bailey dates these from the Augustan to Trajanic period in Italy i.e. from the end of the 1st century AD to the beginning of the 2nd century AD. Eckardt sees them as essentially pre-Flavian in Britain i.e. c AD 43–70 (2002, 182). Fairly common in London.

- Type 1 lamps can only be securely distinguished if the angular nozzle is present. If the nozzle and body are both present is may be possible to subdivide this type into subtypes 1a, 1b or 1c (see Figure 32). Narrow nozzles of 1a tend to be early and are thus very rare in Britain while wide nozzles tend to be later. The very wide nozzles of type 1c are also quite rare and these can continue as late as the early 2nd century. The simplest way to think of the sub-types is to compare the maximum width of the angular nozzle to the maximum width across the volute mouldings. If the nozzle is narrower then you have a type 1a if the nozzle and mouldings are about the same width a type 1b, if nozzle is much wider then you have a type 1c. There is also some correspondence between nozzle width and shoulder type (Figure 32) though this is not absolute and shoulder type should not be used to classify picture lamps in isolation.

Figure 6 Examples of type 1 picture lamps from London © Museum of London
Type 4

- Picture lamp with a rounded nozzle with volute mouldings (see also Figure 33) and normally with a narrow shoulder and concentric grooves (see Figure 58). Occasionally they have slightly wider shoulders. Handles are quite rare and can be mould-made but are more typically applied.
- Dating from the Augustan to Trajanic period in Italy. Eckardt notes that they are found in Flavian deposits but very rarely later (2002, 182–4) in Britain, perhaps therefore c AD 43–80/110 but with a distinctly later dating emphasis than type 1. This is the most common type of picture lamp from London.
- It can only be securely distinguished if the rounded nozzle survives and cannot always be securely distinguished from type 5 (or type 3 which is not known in London so far) if the volute mouldings and/or the full nozzle do not survive. See appendix 1 (Figure 33) for multiple examples of type 4 nozzles.
Type 5

- Picture lamp with a rounded nozzle and half-volute mouldings continuing from the shoulder (see Figure 34 for details), sometimes with a small circle marking where the top part of the volute would have ended. Circular body, normally with a fairly wide shoulder group (see also Figure 59). Handles are much more common on this type than on types 1 and 4 and, at least on London examples, normally seem to be mould-made. They are not, strictly speaking, typologically diagnostic in isolation from the nozzle.
- Bailey argues that these date from the Claudian period to the Hadrianic period. They were probably most common in the 2nd half of the 1st century AD (Eckardt 2002, 185). Rare in London. This may be because factory lamps had begun to displace picture lamps as the key closed lamp type in the northern Empire by the time type 5 was at the height of its popularity.
- This type can only be securely identified if the full shoulder-volute is present. Otherwise small nozzle fragments cannot be securely distinguished from type 4 (or type 3 which is not known in London so far) as both have rounded nozzles. See appendix 1 (Figure 34).

Figure 8 Examples of type 5 picture lamps from London © Museum of London
Type 8

- Picture lamp with short nozzles of various shapes and no volute mouldings (see Figure 35–Figure 37). Circular body with wide externally rounded or sloping shoulder as group B below (Figure 59). Handles are seemingly more common on this type than on types 1 and 4 but are not, strictly speaking, typologically diagnostic.
- Dating from the Claudian period onwards with a later dating emphasis than type 1 and 4. Some sub-types and close relatives continue in use well into the late Roman period elsewhere in the Roman Empire. These are rare in Britain but there are a number of antiquarian finds from London.
- If the nozzle is present it should be possible to subdivide this type based upon the shape of the nozzle into sub-types. These are 8K (round/oval nozzles set on the shoulder); 8H (heart-shaped nozzle set on the shoulder), (see Bailey 1980, xii).

Figure 9 Examples of type 8 picture lamps from London © Museum of London
Factory lamps

Type 9

- Factory lamp with rounded nozzle with flat D-shaped end and closed or part-closed nozzle channel (see Figure 38–Figure 40). The shoulder is always wide and externally sloped/bevelled with lugs and a raised rim around the discus as group C below (Figure 60). Most examples from Britain, Gaul and Germany have handles but not all. Finds from Italy tend not to have handles.
- Dating normally Flavian or 2nd century in Britain. They were made from c AD 60+ in Italy and appear into the 3rd C AD in some places. Type 9 lamps and their derivatives (see below) are the most common styles of factory lamp in London.
- If enough of the nozzle and the adjacent section of the body is present it should be possible to subdivide this type into one of three variants (type 9a, 9b or 9c). 9b with a closed nozzle channel is by far the most common and 9a is essentially just a variation of this in which the nozzle channel is very shallow. Type 9c is more distinctive and here the nozzle channel continues up into the discus making a break in the raised rim that runs around the shoulder. To help you identify these subtypes see appendix 1, Figure 38, Figure 39 and Figure 40.

Figure 10 Examples of type 9 factory lamps from London © Museum of London
Type 10

- Factory lamp with rounded nozzle with a raised rim, normally defining a D-shaped area around the wick hole (see Figure 41 but also Figure 42). The shoulder is always wide and externally sloped/bevelled with lugs as shoulder group C below and a raised rim around the discus which continues along an open nozzle channel and around the nozzle (Figure 60). Handles are common, particularly on Gaulish, German and British examples.
- Dating c AD 90+, mostly 2nd century. Occasionally appearing into the 3rd C AD.
- Most of these should simply be classified as type 10 but if enough of the nozzle and the adjacent body is present a subtype with a short nozzle 10k (see Figure 43) can be distinguished from the main group.

Figure 11 Examples of type 10 factory lamps from London © Museum of London
Local factory lamps

- A variety of more diverse, weirder and generally slightly cruder factory lamps are known from London, mostly local mica-dusted products.
- These have been discussed by Eckardt (2002) but more recent work on kilns around Moorgate/Northgate and adjacent sites in the upper Walbrook valley have added a lot of new evidence.
- Most are derivatives of type 9 lamps with closed nozzle channels but they may have been influenced by type 10s as the channel is often open at the wick hole end and can have a raised borders/rims. Other forms are more obviously derivatives of type 10.
- A more comprehensive/detailed examination of this material is a goal of this project. We hope to be able to assign new clear labels to different types rather than simply describing them as variants of the various continental types. However, this will be best achieved when the full range of material can be examined together. For the present it is sufficient to enter ‘local’ under type. Where possible use the descriptive terms in appendix 1 to describe their nozzles. If you encounter additional nozzle types notify members of project staff and we can add them to the guide.

Figure 12 Examples of locally-made factory lamps from London that don’t fit neatly precisely into type 9 or 10 © Museum of London
Multi-nozzled lamps

- These come in a wide range of forms and include both local and imported types. The nozzle types typically resemble those of type 9, 10 and local factory lamps and should be described using the same terminology as appropriate.
- For guidance on describing multiple nozzles see quick reference appendix 1. Ask a member of project staff for their advice about how best to describe other unusual features associated with multi-nozzled lamps.
- Some are mould made and associated moulds are known from London (Figure 19). However, other examples seem to be partially wheel-thrown and can be regarded as transitional between factory lamps and circular lamps.

![Multi-nozzled lamps from London](https://example.com/multi-nozzled-lamps.png)

*Figure 13 Examples of multi-nozzled lamps from London © Museum of London*
Open lamp types

Type 11

- Open lamp with circular nozzle with a constricted neck before a larger circular body giving it a ‘figure 8’ shape. They can be mould-made or wheel thrown with a circular body and either a hand-made or wheel-thrown circular or sub-circular nozzle.
- Dating from AD 43 until at least the mid-2nd-century, but occasional examples come from third century contexts and may be a little later. Common in London.
- Quite a wide variety of lamps fall into this type with a variety of morphological and technological distinctions. The most commonly used subtypes are defined on the basis of the base. Type 11a lamps have flat bases, type 11a (DEC) have flat decorated bases (see Figure 3) and type 11b have flat bases with a circular foot ring underneath the body (Figure 68). The recognition of these subtypes requires the base of the body to be present and at least part of the centre of the base needs to be present to distinguish between types 11a and 11b.
- Work so far suggests some fairly strong links between form and fabric/source. Simple type 11a lamps with flat bases are most commonly (though not exclusively) made on the wheel in local Verulamium Region fabrics. Type 11a (DEC) with a decorated base seem to have been a particular speciality of the Colchester workshop. Type 11b lamps with a foot ring come from a variety of sources. Some are local but a higher proportion of these lamps are imported.

Figure 14 Examples of type 11 open lamps from London © Museum of London
Type 12 and 11/12

- Small open ‘lamp’ with simple pinched-out nozzle/lip (see Figure 56; Figure 57). Normally wheel-thrown.
- London examples are known from Flavian to mid-2nd-century deposits. Eckardt notes Flavian to 3rd century range of dates from Britain as a whole (2002, 235).
- Similar forms are used as open lamps even today, but scientific analysis has demonstrated that at some Roman examples are in fact crucibles used for precious metal working and it is now standard practice at MOLA to record them as such. You should record them as lamps as normal here for the present but some of the small examples may be excluded from the project later.
- Eckardt distinguishes a subtype which are larger and have more protruding nozzles (2002, 235–8, fig 107, nos. 32 and 2419; see appendix 1, Figure 56 below). In some ways they more closely resemble type 11 lamps and here they should be referred to as type 11/12.

Figure 15 Examples of type 11/12 (left) and type 12 open lamps from London © Museum of London
Type 13

- Small hole-mouthed handled wheel-thrown vessels with no nozzle, the wall curving out then in again.
- The function of these vessels is debatable and they are very rare in Britain but four examples are known from London.

![Figure 16 Examples of type 13 open ‘lamps’ from London © Museum of London](image)

Type 14

- Open lamp or candlestick. Cylindrical circular wheel-thrown lamps with a flat base, no nozzle and a central socket on the interior, sometimes with a perforated wall, which may have held a candle or one or more wicks.
- These are quite rare and can only be securely identified if the central socket in the middle survives.

![Figure 17 Examples of type 14 open lamp from London © MOLA](image)
Section 4: Lamp-making technology

This is an overview of how Roman ceramic lamps are made and some of what the investigation of lamp technology can tell us. For more details on lamp manufacture see Bailey (1976) and Eckardt (2002) which are available as part of the project resources. MOLA Roman pottery specialists will be doing the detailed fabric recording but it is useful for anyone recording lamps to understand the basic ideas behind different the fabrics and industries involved and the technology of lamp making when they are describing and discussing lamps.

Ceramic fabric

The material used to make ceramic lamps is clay which, before firing, is malleable and can be shaped. Once the required form has been produced the lamp is then left to dry before being fired in a kiln at high temperatures to create a hard and durable ceramic.

The ceramic fabric is the solid substance that makes up the lamp. It is comprised of the natural clay and any additional inclusions called temper that the potter has added in order to alter the properties of the clay. Some lamps will also have a thin slip or colour-coat of clay added after they have been shaped but before firing. This can be used to change the colour of a lamp but may also help to produce a desired surface texture or to change the physical properties of the fabric by making it less permeable. The colour of ceramic depends on the chemical composition of the clay and also the firing conditions, particularly the length and temperature of firing and the amount of oxygen allowed into the kiln. Lamps are most commonly found in oxidised fabrics but darker reduced fabrics are also known.

The fabric will be recorded by MOLA Roman pottery specialists who will examine the lamp under a microscope and assign the correct fabric code (Figure 18; MOLA 2014). By examining the fabric it is possible to recognise different ceramic recipes and sets of techniques. This can help us group together lamps that may have been made in the same workshops or within the same local traditions. It is often possible to link specific fabrics with known sources if the kiln/workshop has been excavated or if the clay or temper is chemically or geologically distinctive. We can therefore distinguish local and imported products and reconstruct patterns of trade across the Roman Empire, as well as discussing the different aesthetic and technical choices that different potters make.
Making a lamp

Like the clay recipe, the different types of manufacturing technology used may reflect differences between workshops/producers. Most Roman closed lamps are shaped in a reusable mould to allow them to be mass produced. These moulds were comprised of two halves, one each to form the base and the top of the lamp. Each had a negative impression of the corresponding part of the lamp on the interior (Figure 19). These moulds were most frequently made from ceramic or plaster. The use of plaster moulds rather than ceramic ones is sometimes indicated by small globular lumps on the lamps indicating the location of bubbles in the liquid plaster.

Moulds could have been formed around a newly-made pattern/archetype or used to make copies of a pre-existing lamp. Poorly-moulded/blurred lamps may sometimes reflect the use of an old and badly-worn mould, a mould made by taking an impression from a worn lamp or the effects of successive generations of copying. Theoretically, a family tree of lamps could be established by comparing lamps to one another and recording this process of copying (Figure 20).

Once the moulds were made they could be used to produce large numbers of lamps. A layer of damp clay would be pushed into each half and the exterior face of the clay would be shaped by filling the negative impression on the mould interior. Sometimes we can even see the potter’s finger prints on the inside of the lamp where they pushed the clay into the mould (Figure 21). The two halves of the mould would then be pressed together to produce a complete lamp with a hollow space inside. Surviving ceramic moulds often have keying lugs or registration marks to make it easier to match up the two halves correctly. The join between the two halves of the mould remained a point of weakness and this is why many lamp fragments are broken along the mould seam at the junction between the wall and the shoulder.
Figure 19 Examples of Roman lamp moulds from London. Photographs © Museum of London

Left to right: Picture lamp top mould with rosette discus design; Factory lamp top mould; multi-nozzled factory lamp base mould with maker’s stamp FORTIS; factory lamp base mould with maker’s stamp STROBILI

Figure 20 Three factory lamps from London of the same type in the same fabric, exhibiting stages of decline in the quality and crispness of detail due to successive copying. Note how the face mask on the discus becomes blurred and then becomes a simple boss. The first two are similar enough that they might even have been made in the same mould at different dates or have a common ancestor. The nozzle on the third example is different enough to indicate that despite having the same basic design it has a different ancestor or else that the lamp design has been deliberately modified/altered during the copying process. © Museum of London
Figure 21 Detail of interior surface of a mould-made picture lamp discus body sherd. Note the uneven surface and finger prints from where the clay was pushed into the mould. There is a slight flange around the oil filling hole indicating that it was perforated from the outside. © Museum of London

Figure 22 Side view of a London-made factory lamp. Note the blurred details due to a worn or much copied mould and the splitting along the line of the mould seam. © Museum of London
The lamp would be left to dry and begin to harden before it was removed from the mould and would shrink a little as it dried. Some lamps would have extra features added at this stage such as the addition or neatening of wick holes, air holes and oil filling holes, or the addition of an applied handle, before they were fired in the kiln.

Relatively few closed lamps from London are made on the potter’s wheel. However, there are a few mid-late Roman ‘circular’ lamps from the city (Figure 5; Figure 23). These are sufficiently rare that they have not been covered in detail in this guide but they are discussed by Eckardt (2002). These have simple circular bodies with pinched out or applied nozzles and applied handles added before firing. Unexpectedly, the project has also uncovered a few factory lamps which also have wheel-thrown bodies to which a nozzle has been added afterwards, perhaps representing a transitional form between these lamp types (Figure 24.)

![Figure 23 Wheel-thrown circular lamp with detail of the interior surface of the base of another example. Note the concentric/spiral rilling caused by the potter’s fingers as the lamp was spinning on the wheel during forming. This interior surface has not been smoothed; normally the effect is much less pronounced. © Museum of London](image-url)
Figure 24 A locally-made wheel-thrown factory lamp, perhaps made during the period of transition between mould-made factory lamps and wheel-thrown circular lamp form. Note the tool marks visible on the detail of the interior, caused when perforating the nozzle hole through an applied lump of clay. © Museum of London

While some open lamps were made in moulds, like most closed lamps, others were thrown on the potter’s wheel. For the most common forms the body is thrown in one-piece and the nozzle was thrown or hand-made separately before being attached. Handles for lamps of this sort are also applied after the body is thrown. The interiors of open lamps are often well finished, perhaps because they were more visible than the interiors of closed forms. The smoothing of the surface often erases traces of lamp-making technology. If you are unsure if the lamp is mould-made or wheel-thrown, the clearest indicators often come from the handle or the base. Mould-made lamps normally have lug-shaped moulded handles with a transverse perforation which was made after the lamp was removed from the mould. Wheel-thrown open lamps often have applied handles (Figure 70). Bases are also a useful indicator. Wheel-thrown lamps typically have flat bases, often with visible marks left by a string used to remove them from the mould. Base rings on the other hand are most typically found on mould-made examples and some have moulded decoration on the base (Figure 68).
Section 5: Where next?

Research questions
Some of the key questions and issues we would like to be able to address are listed below. These relate particularly to lamp use in London. For more general perspectives on lamp use see Eckardt’s (2002) wider study of lamps in Roman Britain.

1. What was the scale of lamp use in Roman London and how does this compare to other British and continental sites?

2. Who used lamps? Was lamp use evenly distributed across the population or concentrated in certain areas of the city or certain social groups?

3. What are the relative proportions of closed and open lamps and does this vary across time or between sites? What can this tell us about fuel consumption or the status of lamp users?

4. Can patterns in manufacture such as the use of slips tell us anything about how lamps were used?

5. Does the distinction between locally-made open lamps and imported closed lamps indicate that one was cheaper than the other?

6. What proportions of lamps have handles? Does this change through time? Are handles more common on certain types of lamps?

7. What range of lamp sizes can we recognise and is size related to other variables such as form or the presence of a handle? What might this tell us about how lamps were used?

8. What was the role of the Roman army in the international lamp trade? Did they actively commission and direct supply or were they just major consumers?

9. How and when did the local London lamp industry develop and grow?

10. How do the ‘functional attributes’ and aesthetics of locally produced lamps differ from those of imported lamps? Does this tell us anything about local patterns of lamp use?
Some emerging patterns in lamp supply and use

The first stage of the project took place during 2017. The project team consisted of Ingrid Pons Barneo, Emily Blanchard, Elizabeth Blanning, Guy Bloom, Lucy Creighton, Matthew Fittock, Georgina Hayes, Carolina Rangel de Lima, Jeronimo Garcia Marcos, Michael Marshall, Sonia Matteodo, Suzan Quilliam, Jane Skelding, Kate Smith, Amy Thorp, Mark Tran, John Walledge, Jack Watson and Elisabeth Yvon.

The data is already helping us to understand patterns in lamp production and supply, building on earlier work by Hella Eckardt (2002) and by pottery specialists at the Museum of London and MOLA. These are discussed principally in terms of lamp supply below but have important implications for lamp function as well as there are major differences in size, surface treatment and in provision of features such as handles between different styles and makers. For example all picture lamps seem to have been slipped and very few have handles. In contrast very few open lamps were slipped (mostly those made in Gaul) but all appear to have had handles. Smaller factory lamps made in Gaul and Britain tend to be slipped with handles and larger ones made in Italy tend to be larger and burnished with no handles.

The early picture lamps in London tend to be colour-coated imports from Gaul (modern day France), particularly central Gaul, with a fabric known as Lyon colour-coated ware particularly common (Figure 25). These industries are also important sources for other fine wares to early London. It has been argued that the supply of the Lyon pottery fabric was closely associated with the Roman army, as it is best represented on forts. Its dominance in lamp supply to London might support the idea that the army had a central role in lamp supply and consumption. However, imports from other sources do exist, including a handful of Spanish and Italian lamps, and there are even some early Romano-British picture lamps. Most common amongst these are the products of the workshop at Colchester, thought to be active in the years before AD 60/61.

![Figure 25: Sources of lamps from London using SNLORL data](image-url)
Picture lamp mould fragments from London indicate that they were also made locally in the city. However, as yet the range of local fabrics in which they were made is not well defined and there are relatively few candidates. This may imply that picture lamps were made on a very small scale and some are in mica-dusted fabrics that were rare until after AD 70. It may be that closed lamp production in London did not start until around the time that picture lamps had begun going out of style.

The later factory lamps come from a range of different sources. Unslipped examples with an even and distinctive terracotta orange colour and deliberately burnished undersides are from Italy. Slipped or ‘colour-coated’ examples are more likely to come from Gaul and the Rhineland. These include some of the same central Gaulish fabrics noted above but these fabrics decline in importance as the importance of Italian and Eastern Gaulish lamps increases. This pattern in the supply of London lamps can probably be linked to the foundation of the factory lamp tradition in Italy from c AD 60 onwards and the spread of production to workshops working along the Rhine frontier.

Other aspects of supply were more local, however, and factory lamps were made in London in significant quantities. Many are probably product of the kilns in the upper Walbrook valley area around Moorgate. London factory lamps are often made in mica-dusted fabrics, which have a slight glittery sheen, and can be quite crude. Locally made factory lamps seem to have become increasingly small over time and had handles. They have these features in common with Gaulish and German-made lamps but lamps from Italy and the Danubian provinces further to the east tend to be larger and not to have handles. This raises the question of whether these regional differences in production reflect differences in how lamps were used in these regions.

The earliest fine ware open lamps in London are probably those made in Colchester. These were made in moulds and sometimes have moulded decoration on their bases. They are typically in a fine pale buff fabric and no traces of slip have survived perhaps suggesting that they were unslipped. The number identified during this project was reasonably high leading us to suspect that they may have been mis- or unidentified in the past and that more examples in the Museum core collection and from more recent excavations may be lurking amongst the lamps with unidentified fabrics.

Coarse ware lamps in both oxidised and reduced variants of the local London Sugar Loaf Court ware are also early but there is no evidence yet that these were being made before the Boudican revolt. It may be that their production began to fill a gap in the market after the destruction of the Colchester workshop in AD 60/61. Another major source of coarse ware lamps were the Verulamium (modern St Albans) region industries. The kilns were found in rural areas to the north of Londinium but
from the 2nd century, and perhaps even earlier, potters working in this tradition were also active in London itself using imported clay. The most common lamps made by these industries are unslipped wheel-thrown type 11 open lamps in sandy coarse Verulamium region white ware. These tend to have a white, grey or buff oxidised appearance and are amongst the most common lamps from the city. Other fabrics in the Verulamium region tradition are also found and it is possible that a few later slipped examples, often in forms with base rings, were mould-made. These may imitate imported heavily-slipped mould-made fine-ware open lamps, mostly from Eastern Gaul, which also have base rings and were imported in the later 1st or 2nd century.

Some really interesting size trends are also already starting to emerge from the SNLORL data. These should help to clarify and develop more general trends noted in the lamp literature and some of the conclusions of a 2015 UCL MA thesis on Roman lamps from London by Shona Lindsay which considered the tactile qualities of lamps. The new data shows some major differences in size between lamp groups. The size of closed lamps decreases markedly from larger picture lamps in the mid-1st century to the smaller factory lamps that dominate in the later 1st and early 2nd century. Smaller closed forms more typically have handles and it may be that this marks a functional shift for long burning fixed lamps towards shorter use but more portable forms.

![Figure 26 Frequency histogram and kernel density of body diameters of major lamp groups. Blue = factory lamps; Red = picture lamps; Green = open lamps. Based on SNLORL data record by the volunteer team](image-url)
In general open lamps are significantly larger. This is particularly a feature of the wheel-thrown Verulamium region products and might even represent a particular Romano-British take on the idea. The mid 1st-century Gaulish and Colchester open lamps tend to be notably smaller as do the 2nd century Gaulish and German imports. The larger size of open lamps overall underlines the idea that there are major functional differences between these objects and closed forms. As many are larger than the closed forms it is possible that some functioned as lamp stands but Eckardt (2002; 2011) has questioned this interpretation and her line of reasoning is supported by the observation of sooting on many examples in the project. She argues that they burned solid fuels such as tallow and it may be that their greater volume, and the lack of slip on most large examples, is a reflection of this different in fuel types. Some experimental work is planned to provide data on the burning rates of tallow vs olive oil so we can assess the full implications of this size difference in terms of burning times.

Further reading

The following publications have useful discussions of the manufacture and use of lamps. Copies of most have been sourced for the project and are available to borrow and read on request. Donald Bailey’s 1976 paper provides more information about lamp making. Eckardt’s corpus of British lamps (2002) and Bailey’s British Museum catalogues (1980 and 1988) are particularly useful for looking up less common forms not covered in this guide or looking for parallels for discus designs and maker’s stamps. Sections in Alex Croom’s recent book (2011) consider some of the practicalities of lamp use in a domestic setting.

- Croom, A. 2011 Running the Roman Home, Stroud
- Eckardt, E, 2002 Illuminating Roman Britain Monographies Instrumentum, Montagnac
- Loeschcke, S. 1919 Lampen aus Vindonissa, Zurich
Section 6: Cataloguing a lamp

Standard Museum of London object handling guidelines should be followed at all times when working with artefacts from the archive. These should be explained to you in your introduction sessions but please ask if you have questions about safe/appropriate handling at any time.

The recording of the lamps will use a Microsoft Excel spreadsheet. The aim of the cataloguing process is to produce both a detailed and accurate prose description of each individual lamp, which can be uploaded to accompany its Museum of London Collections Online entry, and a dataset of easy to analyse typological and metric data which we can use to explore lamp use in Roman London. This will be complemented by your observations and thoughts and by the contribution of the MOLA pottery specialists who will be recording the lamp fabrics.

1) Archive information

The first thing to do when examining a lamp or lamp fragment is to enter its sitecode, context number and accession number into the spreadsheet. This information should be written on the bag labels.

The sitecode refers to a specific archaeological excavation or site. Within each excavation, numbers are assigned to individual contexts, such as the fill of a particular rubbish pit or a floor layer, and we use these context numbers to determine where on the site an object was found and what else it was found with. Each individual small find from an excavation also gets a unique registration number which allows it to be distinguished from other objects and clearly referred to in the archive and in publications.

This archival information is crucial as it allows us to distinguish individual lamp fragments, relocate them and to place them in their correct archaeological context. If this information is not correctly inputted then subsequent stages will be a wasted effort.

2) Initials and date

Fill this in so that your work can be properly attributed and so that other project members can direct any questions about this lamp or feedback to you. It also allows us to record progress on the project.

3) Features and typology

These are fields which record basic information about the lamp’s type and features. You will also mention all these features in the catalogue description. This information is
repeated here to allow us to sort and analyse the data more easily. Advice on set terms and filling in this section can be found in appendix 4.

Lamps are normally found as incomplete fragments and so you will not be able to fill in all fields for every lamp. If the relevant part of the lamp is missing simply fill the field with Missing. If you can tell that it was absent on the original lamp note this as None. This distinction is important as it will allow us to distinguish between negative evidence (e.g. a lamp with no handle) and an absence of evidence (e.g. a lamp with no surviving handle). No fields should be left empty.

4) Measurements

Where possible a standard set of measurements should be taken on all lamps in order to allow for comparison and statistical analysis. These are illustrated in Figure 27 and should be recorded in relation to the original lamp i.e. so length refers to the length of the lamp not the length of the fragment. If you are uncertain about orientation ask for advice from project staff or MOLA finds specialists. Sometimes it will not be possible to correctly orientate small fragments, particularly in the case of body sherds. Only in this instance is it appropriate to measure the length of the sherd as a way of recording the degree of fragmentation and this should be recorded in the separate length of sherd field.

If an object is of irregular height, ie if one part of the rim or shoulder is distinctly lower than the other, than measure the maximum height. If this irregularity is obvious you should mention it in your catalogue entry. If you have a very irregular looped applied handle, where the hole is not circular or cylindrical, it might be worth taking two internal measurements rather than one if this would better describe the shape.

It will not be possible to take all measurements on every lamp as some may be incomplete while others may not have originally had all the measured features (e.g. handles). In Excel mark features that are missing from the fragment as Missing if they have broken off/if the right part of the lamp does not survive. Mark them as None if the lamp originally lacked that feature e.g. no handle. Do not leave them blank.

All measurements are in millimetres (mm) and so this does not need to be written out each time. Measurements should be taken using callipers for most features (to 1 decimal place) or a rim diameter chart if estimating the diameter of an incomplete body. It is often possible to measure the body diameter of even small incomplete fragments using a rim diameter chart or gauge. These should be placed in square brackets e.g. [60]. Measurements recorded using a diameter chart should be to the nearest 5mm (e.g. [30], [35], [40], [45] etc).
Figure 27: Standardised measurements for lamps. Photographs © Museum of London
**Incomplete measurements** should be recorded in brackets with + signs to show that they are not the full size e.g. \((45.2+)\). In certain instances where there is only minor damage to an object or where more than half of a symmetrical object has been recovered it may be appropriate to record both an incomplete measurement and an estimate of the original complete measurement in order to maximise the available information. This should be done sparingly and only when there is no ambiguity. Such **estimated measurements** should be preceded by the incomplete measurement, clearly labelled and separated by a semicolon e.g. \((60+);\) est \((75)\)

5) **Writing a catalogue description**

Your catalogue description is the text that will appear on Museum of London Collections Online and this should follow a set format as described below. Because this text will be available to the public you should be careful to write clearly and accurately to avoid the need for editing later. However, this is a technical description so do not worry about writing beautiful prose; a list of descriptive statements is fine. Wherever possible use the standard order below and the standard descriptive terms laid out in the appendices.

The catalogue should have two main parts. These are called **part A** and **part B** below for clarity but do not need to be separated or labelled as such in your text.

When describing lamps, always orient them as if the top is facing you with the nozzle pointing downwards and the handle (if present) pointing upwards. This will allow you to consistently use terms such as up and down, above and below and left and right in your descriptions. Be careful about describing the relative positions of features on the base as left and right are effectively reversed. If a sherd is too small to orient then describe it in relation to itself and so the orientation matches any photo.

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**Figure 28:** A standardised way of orientating a lamp and describing the relative position of features. Diagram by author.
Catalogue part A

This is a basic headline statement about what the object is, what it is made of, what condition it is in and what lamp group and type or subtype it belongs to. Note this information in the order below. All objects covered in this project are made of ceramic (although metal lamps do exist). For completeness use the terminology and criteria described in Appendix 4 below. For lamp type and lamp group use the terminology explained in section 4 above. If the lamp type or group is not clear then exclude this detail from this section. If a lamp has been reconstructed note this and try to determine how many sherds it was in originally for the sherd count field.

Mention the following details in this order.

1. **Completeness**
2. **Lamp type (if possible to identify)**
3. **Material**
4. **Lamp group (if possible to identify)**
5. **Parts present or missing (if incomplete)**
6. **Number of pieces, if they join or are reconstructed (if in more than one piece)**

Examples colour-coded to match the list above

- **Complete** type 1 ceramic picture lamp.
- **Incomplete** type 9b ceramic factory lamp, missing the handle.
- **Incomplete** ceramic open lamp body fragments, two non-joining pieces.
- **Near complete** type 4 ceramic picture lamp with a slightly damaged nozzle in four reconstructed joining pieces.
Catalogue part B

This is a detailed physical description of the form of the lamp. It should cover all of the major features in a standardised order and should be sufficiently detailed that it could serve as a stand-alone record of the object which an artefact specialist could use to classify and date it without needing to see the object itself.

Every part of the lamp that is present should be mentioned in order (see below). Begin a new sentence for every separate part of the lamp (nozzle, body and handle). If the lamp is a type/example which clearly did not have a nozzle or handle (as opposed to a broken lamp missing its nozzle or handle) this should be clearly noted “no nozzle” or “no handle”. If the element simply does not survive then you may exclude it from this part of the description as you will have already noted its absence in part A. Don’t worry about the colour or texture of the ceramic or the fabric name/code as this will be addressed by the pottery specialist.

Where possible you should use the vocabulary laid out in the appendices and it may be useful to modify a copy and pasted description from a digital version of this guide where appropriate.

You do not need to classify every lamp as mould-made or wheel-thrown in your catalogue entry. The MOLA pottery specialist is considering this and will record it in the final excel dataset. However, please do distinguish between moulded and applied handle types (Figure 70) and if you see clear technological features to indicate the use of a potter’s wheel (such as rilling or string marks on the base) or moulded decoration or cracks along mould seams etc then please do briefly describe them in your catalogue entry.

You may also encounter post-production features that tell us about how the lamp was used. Please mention this in the appropriate section of your catalogue entry and put any thoughts you have about their significance in the recorder’s comments field in Excel. The most common is sooting where the lamp has come into contact with flame but in some instances lamps will also exhibit use-wear. Sooting can be recognised by dark grey or black patches. On closed lamps this will be around the nozzle (Figure 30) but on open lamp forms sooting can also appear around the body rim and interior as well.

Wear can be recognised by damage to the surface which is most clearly visible when a smooth, decorated or slipped/coated surface has been worn away to reveal the rougher or differently coloured clay beneath. However, it can be tricky to distinguish between wear that might have taken place in the ground or during excavation from wear that
relates to an object’s use life. If you think you have a meaningful wear patterns show it to a member of project staff. We only want to record distinct and localised wear that might tell us about how lamps were used, not casual scuffing etc. The most common form of use wear is abrasion to the base/foot ring of the lamp from where it sat and was moved around on surfaces.

You may also encounter new features or lamp types not covered in the appendices. If so alert a member of project staff. We are here to help and are always keen to see an interesting lamp. If we have the occasional oddity then project staff will work with you to record the lamp. If we get several examples of one type they will be added to the guide.

Order of cataloguing:

I. **Nozzle**

a) Overall shape including any mouldings or nozzle channel (if present). If more than one nozzle is present note the number. See further guidelines for describing multi-nozzled lamps in appendix 1. If the lamp did not have a nozzle note “no nozzle”

b) Wick hole (if present)

c) Air hole (if present)

d) Note presence of sooting, wear or any deliberate post-production marks

II. **Body**

a) Overall shape (only mention if not circular)

   Shoulder (if closed lamp) or Rim and wall (if open lamp; note any sign of rilling from wheel-throwing on interior)

b) Discus (if closed lamp; including shape, design and oil filling hole)

c) Base (including stamps if appropriate; note clear string/wire marks from the wheel on open lamps)

d) Note any presence of sooting (if not related to nozzle), wear or deliberate post-production marks

III. **Handle**

a) Describe if applied, mould made, or uncertain. If lamp did not have a handle then “no handle”

b) Describe any decoration.

c) Note and presence of sooting, wear or deliberate post-production marks
Examples of complete catalogue entries (parts A and B):

- Incomplete type 4 ceramic picture lamp, missing part of the body. Rounded nozzle with volute mouldings; irregular circular wick hole at the end; pierced slit air hole between the mouldings; sooting around the wick hole extending onto the mouldings. About two thirds of the body survives. Flat shoulder with three concentric grooves around the edge of the concave discus with complete slightly blurred design; gladiator, standing and facing right; circular filling hole to the right of the gladiator’s legs; flat circular base defined by a circular groove. No handle.

- Incomplete ceramic factory lamp body/handle fragment. Part of the externally bevelled shoulder with a raised rim around the discus; one surviving shoulder lug; part of the flat plain discus; missing the filling hole. Missing the base. Start of the broken mould-made handle survives.

- Complete type 11b ceramic open lamp. Circular nozzle with constricted neck. Heavy sooting around rim and interior that extends onto the rim of the body. Body with rounded rim and vertical wall; flat base with foot ring. Mould-made handle.

- Incomplete ceramic factory lamp body fragment in two joining pieces. Part of the externally bevelled shoulder with a raised rim around the discus. Trace of the flat discus.

- Incomplete ceramic lamp handle fragment. Applied handle with groove along the centre.
6) Recorder’s comments
This is a space for you make any additional comments or raise any queries about the lamp. The catalogue description is quite prescriptive so you are encouraged to be more speculative or interpretative here e.g. to highlight interesting features, note similarities to other lamps that you have seen or discuss ways in which you think this object may have been regarded, or have functioned, differently. If you cannot assign a type to a lamp (e.g. if the nozzle is poorly preserved) or a discus design (if incomplete or blurred) but you suspect you know which type it is, then this is a good place to mention your ideas and your reasoning.

This information will not normally appear on Collections Online but can feed into the published article. You do not have to fill this in for every lamp unless you have something in particular you want to say about it.

7) Check the record.
Check that you have filled in every section of the spreadsheet row and that you are happy with your catalogue entry. Check to make sure all your measurements and counts sound reasonable and look for any major outliers (much bigger or smaller numbers than might be expected) in case you have hit the wrong key or forgotten a decimal place. Make sure all your typological codes are those appropriate for the project and that the codes in your excel columns match the terms used in your catalogue. When the record has been signed off against the image by a project staff member or MOLA finds specialist they will initial it.
Appendix 1: Describing the nozzle for the catalogue entry

The nozzle is probably the most complicated aspect of a lamp and it forms the basis for most lamp typologies. Lamps entirely missing their nozzle can be assigned to a broad group (e.g. picture lamp, factory lamp or open lamp) but in most instances shouldn’t be assigned to a specific type without discussing this with a member of project staff or a MOLA finds specialist. Because nozzles are complicated and some types differ from one another only slightly you should try to use the nozzle form descriptions below verbatim in your catalogue entries where possible, modifying them slightly if the nozzle has some peculiar feature.

If you encounter a multi-nozzled lamp then you will end up with multiple observations and multiple measurements for nozzle width and wick hole diameter. To distinguish them the nozzles can be numbered starting at the left and moving right/anti-clockwise (Figure 29). If all the nozzles are similar then you can describe them as a group but if there are any major differences you should mention this. Please distinguish measurements within the Excel spreadsheet also e.g. W Nozzle: N1 22, N2 22.6; N3 (14+)

Figure 29 The numbering of nozzles on multi-nozzled lamps. Viewed from the top of the lamp with the nozzles pointing downwards. Embarrassingly bad drawing by the author
Figure 30 Factory lamp with very clear sooting around the nozzle (above). A key to useful vocabulary for describing sooting (below). Photo © Museum of London. Drawing by author.
Picture lamp nozzles with volute mouldings (type 1, 4 and 5)

Figure 31 Type 1 Picture lamp: Narrow lozenge-shaped nozzle with volute mouldings (left; type 1a) and wide lozenge-shaped nozzle with volute mouldings (right; type 1b). © Museum of London

Figure 32: Type 1 picture lamps: The sub-types of type 1 picture lamps classified on the basis of nozzle width. Left to right: 1a=narrow, 1b=wide and 1c=very wide). Drawing by the author
Figure 33 Type 4 picture lamp: Rounded nozzle with volute mouldings © Museum of London

Figure 34 Type 5 picture lamp: Rounded nozzles with half volute moulding continuing from the shoulder © Museum of London
Short picture lamp nozzles with no volute mouldings (type 8)

Figure 35 Type 8L picture lamp with short D-shaped nozzle panel © Museum of London

Figure 36 Type 8R picture lamp with D-shaped nozzle panel which continues across the shoulder to the discus © Museum of London

Figure 37 Type 8H picture lamp with Short heart-shaped nozzle panel © Museum of London
Factory lamp nozzles with flat D-shaped tips and closed/partially closed nozzle channels (type 9)

Figure 38 Type 9A factory lamps with *rounded nozzle with flat D-shaped tips and very shallow closed nozzle channel* © Museum of London

Figure 39 Type 9B factory lamps with *rounded nozzle with flat D-shaped tips and closed nozzle channel* © Museum of London

Figure 40 Type 9C factory lamp with *rounded nozzle with flat D-shaped tips and nozzle channel open at the discus end* © Museum of London
Factory lamp nozzles with raised rims and open nozzle channels (type 10)

Figure 41 Type 10 factory lamp with rounded nozzle with a raised rim defining a D-shaped area around the wick hole and an open nozzle channel © Museum of London

Figure 42 Type 10 factory lamp with rounded nozzle with a raised rim defining a circular or sub-D-shaped area around the wick hole and an open nozzle channel © Museum of London

Figure 43 Type 10K factory lamp with very short (left) or short (right) rounded nozzle with a raised rim defining a D-shaped area around the wick hole and an open nozzle channel © Museum of London
Common local factory lamp nozzle variants
These are unusual local variants of factory lamp nozzles. They tend to be quite varied and crude, keep your eye for other varieties and flag them up to project staff so that we can add them to the list. Ask for help describing them if you are unsure.

Figure 44 Local type 9 factory lamp variant with rounded nozzle with irregular flat tip and closed nozzle channel flanked by raised rims © Museum of London

Figure 45 Local type 9 factory lamp variant with crude rounded nozzle with nozzle channel open at the wick end and flanked by raised rims © Museum of London
**Multi-nozzled lamps**

The examples below can be adapted to different numbers, styles and arrangements of nozzles. Any description should include the number of nozzles, whether they are conjoined, the style/details and their spacing on the lamp.

Figure 46 *Multi-nozzled factory lamp with 4 separate rounded nozzles with flat D-shaped ends and closed nozzle channels spaced evenly around the lamp* © Museum of London

Figure 47 *Multi-nozzled factory lamp with at least 3 crude rounded nozzles with closed nozzle channels, spaced evenly around the lamp* © Museum of London

Figure 48 *Multi-nozzled factory lamp with two conjoined rounded nozzles with shallow closed nozzle channels* © Museum of London
Some other factory lamp oddities known from London

Figure 49 Unusual type 10 factory lamp variant with rounded nozzle with a raised rim defining a D-shaped area around the wick hole and a nozzle channel closed at the discus end © Museum of London

Figure 50 Unusual type 10 factory lamp variant with a rounded nozzle with a raised rim defining a nozzle channel that is closed at the discus end © Museum of London

Figure 51 Unusual type 9 factory lamp variant with rounded nozzle with D-shaped tip and no nozzle channel © Museum of London
Figure 52 Unusual type 9C factory lamp/open lamp variant with rounded nozzle with flat D-shaped tip and a nozzle slit running into an open discus © Museum of London
**Figure-of-eight-shaped open lamp with circular nozzles with constricted necks (type 11)**

*Figure 53: Type 11 variant open lamp variant with rounded nozzle with internally constricted neck © Museum of London*

*Figure 54: Type 11 open lamp with slightly irregular hand-made rounded nozzle with constricted neck © Museum of London*

*Figure 55 Type 11 open lamp with circular nozzle with constricted neck © Museum of London*
Open lamps with rounded nozzles (type 11/12 and 12)

Figure 56: Type 11/12 open lamp with long rounded nozzle with no constriction © Museum of London

Figure 57: Type 12 open lamp with pinched-out nozzle/lip © Museum of London
*Wick holes and air holes*

Wick and air holes need little description. Describe the number, position and shape of the holes; usually circular or sub-circular for wick holes and circular or slit for air holes.

Note if they are irregular, if there is any sign of multiple cuts/Attempts to perforate it and if there any holes that are marked out but not perforated as is occasionally the case with air holes (e.g. on the Samian type 10K lamp in Figure 43 (right) above).
Appendix 2: Describing the body for the catalogue entry

Shoulders, shoulder decoration and shoulder lugs (for closed lamps only)
Very complicated typologies of shoulder shapes exist but here we propose to use a fairly simple system. Three main groups of shoulder shapes can be recognised on common London lamp types.

Shoulder type A – Narrow undecorated shoulders with concentric grooves
Type A shoulders are narrow shoulders with one or more concentric grooves before the discus and are otherwise undecorated. These are particularly typical of volute picture lamps of types 1 and 4. They are typically flat or slope slightly inwards but can sometimes be slightly externally bevelled in a manner more comparable to the wider shoulders of type B. This distinction in shape can be made in the catalogue entry but does not need to be distinguished in the typology fields.

In your catalogue description describe as ‘flat’ or ‘slightly concave’ as appropriate and count the number of concentric grooves e.g. “flat shoulder decorated with three concentric grooves at the border of the discus”. In the shoulder shape Excel field it is sufficient to write A and the number of grooves e.g. A1 or A4. In the shoulder decoration/lugs field write “None”.

If you do not have the full width of the shoulder and cannot be sure of the number of grooves this should be clearly indicated. In catalogue entries write “incomplete flat shoulder with at least three concentric grooves at the border with the discus” or similar. In the shoulder shape field place the number in brackets with a plus sign to show that it is incomplete e.g. “A(3+)”.

Figure 58: Picture lamps with flat shoulder decorated with concentric grooves. Typical cross-sections below. Photographs © Museum of London
Shoulder type B – Wide externally rounded or bevelled shoulders with concentric grooves

These are wide shoulders which are rounded or occasionally bevelled on the exterior edge, normally with one or more concentric grooves at the inner edge before the concave discus. They are most typical of type 5 and 8 lamps in London.

Occasionally shoulders are decorated but given the small numbers likely to be encountered in London assemblages we have not devised a detailed classification system here. Note the type of decoration as either “incuse” if it sinks into the surface of the lamp or “relief” if it projects outwards from it and describe its character as best possible with reference to examples illustrated and described by Bailey. If you are uncertain ask for advice.

Examples might be “wide externally rounded shoulder with incuse ovolo decoration and two concentric grooves at the border with the discus” or “wide externally rounded shoulder with three concentric grooves at the border with the discus and three rows of relief pellet decoration.”

In the shoulder decoration column note “None”, “Incuse” or “Relief” as appropriate.

Figure 59: Picture lamps with externally bevelled shoulders, either plain (left) or with relief decoration (centre and right). Some cross-sections below. Photographs © Museum of London
Shoulder type C – wide shoulders with lugs and raised rim around the discus
These are externally bevelled shoulders with a raised rim round the interior edge normally with a vertical drop to the discus. Shoulder lugs imitating those on some metal lamps are present in varying numbers (typically between 2 and 4) and are normally spaced fairly evenly around the shoulder sometimes with a gap to take into account the handle. They are typical of factory lamps.

The externally bevelled shoulder normally continues onto the nozzle. The raised rim on the interior edge forms a closed circle around the discus on lamps of type 9a and 9b. Type 9c lamps have a break in the rim for the nozzle channel (see Figure 40) while on type 10 lamps the rim continues all the way around the nozzle channel normally defining a D-shaped area around the wick hole at the end Figure 41–Figure 43.

In your catalogue describe the shoulder as “externally bevelled shoulder with raised internal rim” and note the type and number of shoulder lugs. The three major types are “solid”, “perforated” and “grooved”. Solid is by far the most common. Where the shoulder is incomplete this should be made clear e.g. “externally bevelled with raised internal rim and at least two solid shoulder lugs”. Sometimes shoulder lugs may be faint or poorly moulded, especially on local products, as in case of the lamp on the right in Figure 60 below.

In the Excel shoulder/rim shape field it is sufficient to write C and the number of lugs e.g. C2 or C3. If the shoulder is incomplete and you are unsure about the number of lugs, place the number in brackets with a plus sign to indicate this e.g. C(2+). In the shoulder decoration/lugs field describe the lugs as “solid”, “perforated” or “grooved” as above.

Figure 60: Externally bevelled shoulders with raised rim around the discus and shoulder lugs. Typical cross-section below. Photographs © Museum of London
Discus, discus designs and filling hole (for closed lamps only)

When describing the discus of a closed lamp describe the shape, the condition of any discus design, the details of the discus design and then the filling hole(s) in that order.

The shape will normally be concave or slightly concave on a picture lamp or flat on a factory lamp. You should describe whether the discus is plain or whether it has a complete or incomplete design. If there is a design note whether it is clearly moulded (easy to make out with crisp lines/edges) or blurred (shallow and/or unclear, often with poorly defined edges or details).

Picture lamps often have a design and there are lots of different types. Where a discus design is present the first thing to do is to try to identify it with reference to the lists of discus designs published by Bailey (e.g. 1980; 1988). If you find a close parallel note the publication page and figure reference in the appropriate excel column. Factory lamps are more frequently plain and where they do have a discus design this is most usually a central theatre mask or face or a simple boss that might be derived from these motifs.

Once you have identified a design or decided that you cannot identify it then you should describe it. There will be an image of the design and so if it is identifiable you do not have to spend a lot of time describing every last detail. If it is unidentifiable you should record any features that you do recognise to help other identify it later. In either case you should note all the distinct elements that are present, their relative position and their orientation. If there are additional details that you thing are interesting/important include them in the recorder’s comments.

Discus design descriptions do not need to be too long or complicated. In most cases a single sentence will do e.g.

- Border decorated with transverse lines around an undecorated centre (Figure 61)
- Myrtle wreath (Figure 62)
- Eight-petalled rosette (Figure 63)
- Fallen gladiator seated facing right with a dropped shield to his right (Figure 64)
- Cupid and hare, seated facing right (Figure 65)
- Victory standing on a globe facing forward (Figure 66)

The oil filling hole is a hole through the discus where liquid fuel could be poured into the interior. Note the number, shape and position of the oil filling hole(s).
In some instances it may be sufficient to simply say “in the centre of the discus”, “at the bottom of the discus” or at the left and right sides of the discus but when there is a discus design its relationship to this feature should also be noted e.g. “under the sail of the ship”. In the excel field simply count the number of filling holes. If the section of discus with the filling hole has broken off and is missing write **Missing**. If the lamp is an open lamp without a discus write “**None**”.

**Examples of discus descriptions**

![Figure 61](image1.png)

*Figure 61* Concave discus with complete clearly moulded design. Border decorated with transverse lines around an undecorated centre. Circular filling hole in the centre. © Museum of London

![Figure 62](image2.png)

*Figure 62* Slightly concave discus with complete clearly moulded design; myrtle wreath; irregular sub-circular filling hole, slightly off-centre; slight central dimple shows where the filling hole was marked out originally on the mould. © Museum of London
Figure 63. Part of a slightly concave discus with incomplete clearly moulded design; around half of an eight-petalled rosette surviving; missing filling hole. © Museum of London

Figure 64. Concave discus with complete slightly blurred design; Fallen gladiator seated facing right with a dropped shield to his right; circular filling hole at the top of the discus and slightly offset to the right between the gladiator and his shield. © Museum of London
Figure 65 Concave discus with complete clearly moulded design; Cupid and hare, seated facing right; circular filling hole at the bottom of the discus and slightly offset to the right below Cupid’s legs. © Museum of London

Figure 66 Slightly concave discus with complete slightly blurred design; Victory standing on a globe facing forward; sub-circular filling hole to the left side of the lamp below her right arm. © Museum of London
**Walls and rims (for open lamps only)**

This is basic scheme for describing the shape of the walls and rim of the body of a basic open lamp. In your catalogue description use the written description. In the Excel typology field use the codes in blue from the figure.

These classifications are inevitably subjective and wheel-thrown vessels in particular will not fit neatly into these types. The descriptions are a guide only. Don’t spend too long obsessing over the description of the wall as it is not clear if this feature is of any typological or functional significance.

![Diagram of wall and rim configurations](image)

*Figure 67: Cross-sections of open lamp bodies illustrating different rim and wall configurations. Diagrams by author*
**Bases**

The main types of base are outlined in Figure 68 below and the descriptions should be used in the catalogue entry. You may also encounter others or blurred or poorly defined versions of these types. There is no separate typology field for base form. Base form is related to typology but you should not normally assign a lamp to a specific group/type in the catalogue description or typology fields on the basis of the base alone unless it is a factory lamp base with a maker’s stamp. However, if you have not been able to assign a lamp to a group otherwise you may want to suggest a probable group in the recorder’s comments field.

The main trends seem to be as follows. Bases that are flat across the entire lamp are most typical of open lamps as are flat bases with well-defined circular foot rings. The difference between these two base types is the basis for the distinction between type 11a lamps (flat) and type 11b lamps (flat with foot ring). Flat decorated bases on open lamps place them in the 11a (DEC) subtype, most of which are Colchester products.

Closed lamps more typically have a circular base on the body which is smaller than the shoulder. Picture lamp bases are normally flat circles defined by a groove but occasionally they are slightly concave/have a shallow foot ring. Factory lamps typically have concentric grooves or ribs often with concave centre with a relief stamp. Some factory lamps have entirely flat circular bases. This may be a useful indicator of local manufacture and of manufacture on the wheel but the strength of this connection has yet to be demonstrated.

*Figure 68: Major base types. Photographs © Museum of London*
**Maker’s marks**
Most maker’s marks appear on the base and strictly speaking most are actually moulded rather than stamped. Marks/stamps can be described as **incuse** if they sink into the surface and **relief** if they project out from it. Picture lamps are only rarely marked, with subject matters that can include footprint and ring and dot motifs. If you spot one of these you should look it up in Bailey (1980; 1988).

Factory lamps commonly have maker’s names on the base. The most common names found in Britain are listed by Eckardt (2002) and Bailey (1980; 1988) provides more comprehensive lists. The most common makers recorded on MOLA’s database are FORTIS, STROBILI, EVCARPI and COMVNIS but quite a few others are also attested in London such as ATTILVS, ATTVSA, PREPONIS and VIBIUS. While these name probably originally referred to a specific maker/workshop the same names appear in lamps of different fabrics and over long periods of time suggesting that many are either products of branch workshops or forgeries/copies.

When typing out inscriptions place any uncertain letters inside curved brackets e.g. (FOR)TIS if the first three letters of the inscription were blurred and unclear. If the inscription is incomplete but you can tell what it is likely to have been then restore the remaining letters within square brackets e.g. FOR[TIS] if only the letters FOR survived before a break. If there are letters within an inscription that you cannot read and you are unsure of what they are likely to have said then mark these with ellipses within curved brackets e.g. F(…)IS.

![Figure 69: Selection of maker’s marks. Left to right: Relief mark showing maker’s name Fortis with a ring and motif beneath; incuse mark with scratched trinomina initials and ring and dot motif; and relief mark with numeral XXXII. © Museum of London](image-url)
Appendix 3: Describing the handle for the catalogue entry

Handles are normally set at the back of the body opposite the nozzle. They are not present on all lamps. They are rare on early picture lamp types (principally types 1 and 4) but more common on later picture lamp types (type 5 and 8) and on factory lamps and type 11 and 13 open lamps.

Handles are quite variable and it is not proposed to create a comprehensive classification system for them here. However, an important technological distinction must be made between mould-made handles which were shaped in the mould and are integral with the body of the lamp and applied handles which were added after the body of the lamp had been shaped. Describe any decoration simply e.g. undecorated, incised lines or ribs.

You should note positive evidence for a handle even if it only survives as a short broken stub or scar where the handle has broken off. In the excel fields these types of broken handles should be noted as trace.

If the back/top of the lamp are present and you can confidently determine that there is no handle this should be briefly mentioned in your catalogue entry as No handle. In the excel field write None.

If the relevant section of the lamp is not present and you cannot determine if the lamp handle a handle you do not need to mention this in the catalogue. In the excel catalogue note this as missing.

Figure 70 Examples of mould-made (left) and applied (right) handles © Museum of London
Appendix 4: Lists of values and quick reference guide for filling in the typology and measurement fields in Excel

*Lamp group (List of values; Chapter 5 for guidance)*
- Picture
- Factory
- Closed (for fragments of closed forms where group cannot be determined)
- Open
- Other (use for examples that do not appear to fall into any of the groups, check with a member of project staff before using)

*Lamp type (List of values; Chapter 5 and appendix 1 for guidance)*
Refer to appendix 1 for advice on typology based on nozzles

For handle or base fragments that cannot be closely identified write
- Unidentified

Types of picture lamp
- 1 (or subtypes 1a, 1c, 1d if width of nozzle can be determined)
- 4
- 5
- 8 (or subtypes 8H, 8L, 8R based on nozzle shape if well preserved)

Types of factory lamp
- 9 (or subtypes 9A, 9B, 9C, based on nozzle channel shape if preserved)
- 10 (or subtype 10K based on short nozzle)
- Local (or subtype local 9VAR if closed channel related to type 9s)
- Multi-nozzled

Types of open lamp
- 11 (subtypes 11a if base flat and plain, 11a(DEC) if base flat and decorated, or 11b if base has foot ring, 11VAR if other weird variant but check with LC or MM first)
- 11/12 (as 11 but with long pinched out nozzle without constricted neck)
- 12
- 13
- 14
- Other (use for types that do not appear to fall into any of the groups, check with a member of project staff before using)
**Completeness**
- **Complete**: The lamp is undamaged. 1 in sherd count field.
- **Near complete**: Lamp has only minor or superficial damage. 1 in sherd count field.
- **Broken but complete**: Use when the entire lamp is present in broken but adjoining pieces. Note number of pieces in catalogue and in sherd count field.
- **Incomplete**: at least one element of the lamp is badly damaged or missing. Note missing elements in catalogue and number of pieces in sherd count field

**Measurement fields**
Full guidelines on measurements appear in section 5.6 and Figure 27. Remember that you are measuring the lamp not the sherd. All measurements are in mm to 1 decimal place e.g. 6.2 if measured with callipers or rounded to the nearest 5mm if measured using a rim chart.

**Incomplete measurements** should be noted in rounded brackets with a + symbol e.g. (45+)

**Measurements taken with a rim chart** should be noted in square brackets e.g. [65]

If you are confident about estimating the complete measurement when more than half of the width of a symmetrical object survives, this should be preceded by the incomplete measurement, clearly labelled with est for estimated and separated by a semicolon e.g. (60+); est (75).

**Nozzle**
- **Yes** (if complete or enough to determine shape and type)
- **Trace** (if small part but too little to classify)
- **Missing** (if nozzle portion is missing)
- **None** (if the original lamp did not have a nozzle, e.g. open lamps types 12, 13 and 14)

**Airholes (for guidance see appendix 1)**
- **Number** (the number of perforated holes)
- **Marked only** (if marked out but unperforated)
- **Missing** (if nozzle portion including any air hole is missing)
- **None** (if the original lamp did not have an air hole or marking out for one)

**Body**
- **Yes** (if complete or enough to determine basic features of shape, shoulder type etc)
• **Trace** (if small part present attached to nozzle or handle fragment but too little to classify)
• **Missing** (if body is missing)

**Shoulder/rim shape (for guidance see appendix 2)**

For closed lamps

- **A** with number of concentric grooves e.g. **A3** or **A(2+)**
- **B** with number of concentric grooves e.g. **B3** or **B(2+)**
- **C** with number of lugs e.g. **C3** or **C(2+)**
- **Missing** (if shoulder missing)

If shoulders are incomplete then it is appropriate to place the number within brackets and use a plus sign to show that it is a minimum number e.g. **A(2+) if you can see two concentric grooves but there may have been more or C(2+) if you can see two lugs but there may have been more**

For open lamps

- **F/V** = Flat rim with vertical wall
- **F/A** = Flat rim with angled wall
- **F/CO** = Flat rim with wall curved outwards
- **F/CI** = Flat rim with curved out then in wall
- **R/V** = Rounded rim with vertical wall
- **R/A** = Rounded rim with angled wall
- **R/CO** = Rounded rim, wall curved outwards
- **R/CI** = Rounded rim with curved out then in wall
- **Missing** (if body missing)

If either the rim or wall shape cannot be determined replace this with a ? An example would be **?/V** for an open lamp with a vertical wall missing the rim. Or **R/?** for a rounded rim with a damaged wall where you can’t determine the orientation.

**Shoulder decoration/lugs**

For picture lamps use

- **Relief** (type **B shoulders only**)
- **Incuse** (type **B shoulders only**)
- **Plain**
- **Missing** (if shoulder missing)

For factory lamps with type **C shoulders** describe the shoulder lugs as
• Grooved
• Perforated
• Solid
• Missing (if shoulder missing)

For open lamps
• None

Discus design
• Short description of design if present eg “Gladiator”.
• Unidentified (if clear but identification not known)
• Unclear (if too partial or blurred to identify)
• Plain (if undecorated)
• Missing (if discus not present)
• None (if open lamp)

Discus reference
If you find a close parallel for a discus design in Bailey note the page and figure reference here e.g. p45, fig 35.1. Otherwise leave blank

Oil filling holes
• Number of filling holes present
• Missing (if discus not present)
• None (if no discus i.e. open lap)

Maker’s marks
Write the maker’s full name if known if there is a legible stamp e.g. FORTIS. Write “Illegible” if there is a name but you cannot read it because it is blurred or incomplete. Write “Other” if some other kind of maker’s mark is present. Fuller description of the inscription or any maker’s mark should be in the catalogue description.
• None if no visible maker’s mark

Handle (for guidance see appendix 3)
• Moulded (if mould-made handle present)
• Applied (if applied handle present)
• Trace (if small part or scar where broken off indicates that a handle was present but it cannot be assigned to a type)
• Missing (if this part of the lamp is missing and thus not clear if a handle was present)
• None (if the original lamp did not have a handle)