

Guidance Document:

PART 2 – PHOTOGRAPHY and ADDITIONAL RECORDING

Introduction

Photographic technology continues to advance apace, and now even mobile phones can have remarkable capabilities, but a single lens reflex (SLR) digital camera is really needed to photograph the stones because the files are higher quality.

It is usually easiest to set the camera to automatic, but if a team member is more accomplished with digital cameras, it can be helpful for some of the images that are of the inscribed and decorated face of the monument to limit the depth of field so that any background is blurred. Details of lettering, motifs and any mason names may require a close-up setting. It is now relatively easy to take digital photographs; the challenge is to make sure they are consistent in terms of composition, and that there is a sensible balance between photographing general views and details.

There may be some need to trim grass or other vegetation in front of the memorial, especially if text and decoration is close to the ground. This should be considered as the photographer looks at the subject through the camera, and any trimming should take place at this point.

Composition, scales and numbers

Photographs should be taken face on to the headstone, with the face filling most of the frame, though for more complex memorials an oblique view may be more informative. Sometimes gaining a little height can be advantageous, particularly in the case of ledger stones; a small aluminium stepladder is ideal. To maintain some standardisation, and so that visual comparison can easily be made, it is helpful to take photographs of headstones to fill most of the frame, but with some margin. It may be worth getting lower or higher to minimise extraneous visual distraction such as trees or other memorials. Headstones at an angle may require an image showing it leaning, and another which attempts to show the face 'head-on', which may even require lying on the ground and looking up at the inscribed face if the headstone leans forward. In all cases be very sure that the memorial is stable.

A scale should be included in all record photographs; 30cm or 50cm lengths are not too intrusive. They should be coloured red and white, or black and white, and set against or beside the memorial. They can be made by painting a ruler or length of dowel; it is possible to use coloured tape (such as electrical tape) to create the alternate stripes. These can look less elegant than painted scales, but these are time-consuming to create. In order to avoid any confusion, the graveyard code and monument number should be provided. A small black plastic pegboard with movable white letters is one solution, but magnetic numbers and letters fixed to a panel may be easier to use and more visible. It is important that the digits must be large enough to be easily read on the photographs. A whiteboard marked up with a drywipe pen is less elegant but easier to operate; a cloth must be used to wipe away all smears as the numbers are changed, and make sure that the main text does not get smudged. The size of whiteboards sold for kitchen are a very suitable size, inexpensive, and easily available. An alternative is a small blackboard on which the code and monument number can be written in chalk; the same need to keep the writing clear and with no smears applies. Small blackboards can be easily made from plywood, and blackboard paint can be purchased at DIY stores.

Whatever method is used for identification, the board must stick well above the grass, so it may have to be taller than first imagined. When in use, prop the board and scale in places where they are visible but not aesthetically obtrusive and do not cover any feature of the stone. Blue tack can help keep scale and board in place, particularly on leaning monuments. For burial grounds where the monuments are surrounded by grass, it may be possible to fix a metal rod or 6-inch nail to the base so that this can be stuck into the ground to hold the elements upright. This also prevents them being blown over in a strong wind.

Exposure and lighting

Exposure is critical if the photographs are to be of much value. With many memorials, the automatic mode on digital cameras will be sufficient but, in some cases, it is worth using more complex settings, when the following issues should be borne in mind.

It is most important to obtain a reading for the face of the stone and not the general environment. Where the photographer is crouching low and there is sky visible round the monument it is most important not to have the light reading distorted by this. In order to minimise the impact of any nearby headstones, or monuments in another row, depth of field should be kept low so that other extraneous monuments and vegetation are blurred in the print. Limited depth of field is particularly easy with headstones; oblique views of larger monuments will need greater depth of field. With all the factors that need to be taken into account to obtain the best photographs.

Lighting has already been discussed with regard to the inscription but, whereas different parts of the inscription might be visible at various times or in different conditions, the photograph is taken at one moment. Oblique lighting is generally desirable to bring out the incised decoration and inscription; this may be available by direct sunlight, but often other solutions have to be found. A large white card, or a photographer's white umbrella if available, can direct strong sunlight onto the face of a memorial when the sun is not in an appropriate position; with less strong sunlight a board covered with kitchen foil, or a full-length mirror can be useful. Directional flash oblique to the stone is also a reliable method, though to prevent too much harshness this may be best deflected off a card; some experimentation is needed to ensure an even coverage over the face of the stone. Face-on flash from a unit fixed on the top of the camera is usually ineffective, as it removes surface variation.

The use of a tripod may be helpful, though in good light it is usually much easier to stand or crouch at the appropriate height. In dull light, a flash not fixed to the top of the camera but held at a suitable angle to one side may create much more useful image, though this requires some experimentation to produce images that look 'natural'.

Logistics

There are two ways to integrate photography into a project. With one approach, photography is not be the first stage in the recording process, but it comes after the recording forms have been filled in and, ideally, after the graveyard plan has been drawn up. The plan will allow the photographer easy identification of each monument, and the photographer or an assistant should also have the actual record sheets for reference, particularly if only a sketch plan of the graveyard or cemetery has been made. It is very easy to become confused both as to which stones have been photographed and which monument has what number. The other approach is to create a site plan, and then photograph the memorials. Parts of the forms can then be

completed inside, to be later checked in the field. This can reduce time spent copying easily read inscriptions, and coding shapes of headstones and decorative motifs can also be achieved, though all need checking in the field.

Whichever procedure is adopted, it is easier, quicker, and more reliable if a team of at least two undertakes the photography, especially if there is more than one set of scale and board as the next memorial can be made ready whilst another is being photographed. The preparation and photography can progress very smoothly with one person taking the photographs and making any notes, and with one or more identifying the stones on the ground, preparing the number boards, and clearing back any vegetation. If one person does all the work they have to keep putting down and picking up the records, camera and other equipment, and it is very easy to forget to change the number board or lose one's place, particularly on long rows of similar headstones. Plenty of time needs to be allowed for photography, and if natural oblique light is being used then only a small number of stones can be photographed at an optimum time during each day. There is no need to photograph stones in any particular order as long as a continuous record is kept of what has been done.

It is advisable to take one picture with scale and number board, and another without. The first allows checking that the number is correct, the other will be a more attractive image. With digital images, it is easy to take several pictures of each stone, though simple headstones only require these two images. Not every subsidiary image requires the scale and number board. A general view of a kerbed plot is often valuable, as well as a close-up of the memorial itself. Sometimes details of the decoration or features of the inscription or mason's details may be worth a separate photograph.

Digital photographs should be downloaded into a dedicated folder, and this should be copied onto several locations for security. The photographs then should be renumbered using the site code and memorial number, with a final letter that can differentiate the various images of the same memorial. In order that photographs from a burial ground become listed in numerical order (valuable for checking and also locating images of particular memorials) it is necessary to number them as three- or four-digit numbers. Thus, the SUTM19 survey (of a site with less than 1,000 memorials) would have the photographed numbered SUTM19 001a, SUTM19 001b, SUTM19 002a, SUTM19 002b, SUTM19 002c, etc.

Additional recording, including rubbing

Although the recording form and photograph will be sufficient for many memorials, and they should be used to provide a standard data set for all, there will be some which require additional recording. In this case, the 'comments' section of the form should point the user of the basic archive to the location of the additional material. The most frequent additional records will be measured drawings, rubbings, or digital scans or RTI imagery files.

Complex monuments

Measured drawings, produced using the same techniques and conventions as archaeologically recorded buildings elevations, would also be valuable records of complex monuments. The mouldings should be recorded using a profile gauge. This could be valuable in the identification of carvers and workshops who used the same templates to produce a number of stones. Measured drawings can also record many details of construction, such as rebates, and the use

of pegs, dowels and brackets to hold the various structural elements together. Larger monuments were often made from a range of materials, with only the exterior surfaces clad in stone. Cross sections illustrating this should be made where possible.

Rubbings

Rubbings have not been widely used in Britain and Ireland, though they are a frequent part of grave recording in North America. This may be because interest in gravestones has been either mainly genealogical or archaeological, rather than design based. Another reason is that the best rubbings can be produced on smooth surfaces with cleanly surviving letters, such as slate; many of the North American rubbings, and those few produced here, tend to be on such materials. Some of the few instances of rubbings in Britain have been on the slate memorials of the Midlands. The quality of such rubbings can be very high indeed, and produce artwork equal to the finest brass rubbings. It is possible to use this method successfully on other stone types, but only if the surface of the stone is robust. If the surface of the stone is at all fragile, as with some types of sandstone, for example, do not attempt any rubbing.

As rubbing is abrasive, it should be avoided wherever possible and RTI (see below used instead), but sometimes it may still be used. On a project at Clonmacnoise, Co Offaly in Ireland a large number of headstones have been laid flat and many are now partially or completely grown over with turf. On cutting back the turf and revealing the monuments, many were found to have extensive inscriptions and elaborate decorative schemes at the top of the stones. As they were lying flat and the light never fell at an appropriate angle, rubbing was tried on the hard sandstone and limestone monuments, and even though most had false relief carving several millimetres deep with rounded edges, the rubbings provided an effective method of recording the stones and establishing a repertoire of motifs and designs to place them in a typological scheme.

Before producing a rubbing, brush the surface of the stone clear of loose material. Lichens should not be removed for both ecological and stone conservation reasons, and most types do not interfere with the recording rubbing (though some may mar an artistic version).

Brass rubbing paper can be obtained from specialist centres, though lining wallpaper is effective, cheap, easily available and quite suitable for most purposes. Moreover, it is designed to hold together even if damp, though it can only be used in very light rain and care has to be taken that it does not tear. Some memorials are wider than a roll. In such cases the memorial will have to be recorded in either vertical or horizontal sections. If only decorative motifs or initial letters are to be recorded by rubbing, smaller sections will be sufficient. In all cases it is essential to mark any rubbing immediately with the memorial number, to avoid later confusion. Rubbings should be rolled up with the design on the inside. It is useful if the number is also put on the outside of the rolled-up artwork, so that each one does not have to be unfurled when analysis takes place later.

Holding the paper in position can be difficult and if at all possible rubbing should not be attempted in strong winds. When the surface is horizontal, stones or small boxes filled with heavy material can hold the paper firm. Headstones present greater difficulties. Masking tape will work well on some stone types, wide dress making elastic near the top and bottom of the paper sheet is also effective, can be reused, and causes less interference with the stone on removal. The elastic should be in loops stretched right across the paper and round the back of

the stone; these can be moved out of the way to allow all of the stone to be rubbed. Loops of various sizes may be required if there is a large variation in the size of the headstones.

Care must be taken not to crayon onto the stones if only one part is being rubbed. Experience from North America suggests that colouring agents from the crayons can bleed through the paper, and this can be particularly problematic on pale coloured stones such as marble.

Rubbing can be undertaken with cobbler's heel ball wax, children's thick wax crayons, or those specially available at brass rubbing centres. Experimentation has indicated that rubbings in some colours are more legible than others. Whilst black provides a good contrast, it can be too dramatic, and dark colours such as blue, brown, green, red and purple seem more comfortable on the eye; pale colours can be rather indistinct. It is essential that an even amount of pressure is applied with the wax crayon for all the rubbing. Rubbing in various directions may help to bring out all the features, and it is sometimes best to work in the same direction as the lines of incision or carving.

Once the field rubbing has been made it is essential that it is checked and annotated in front of the stone. If the rubbing is not clear in all details, it is advisable to draw round the shapes with a soft pencil so that the decoration can be studied later. Sometimes details not easily visible on the stone will appear on the rubbing and these should be checked by feeling with the fingertips to help annotate the drawing and clarify the carving.

Whilst the forms and their photographs can be easily stored, rubbings are more difficult. They can take up a great deal of space and are difficult to store. Once flattened, they can be housed in horizontal or vertical plan chests, but long-term storage by this method is difficult to justify. Photographing the rubbings may be a solution, but perhaps the most effective is to trace off the design, aided by the pencilled annotations where necessary, using a thick black pen. The resulting line drawings can be photographed, scanned or photocopied and reduced to a reasonable size; always remember to include a scale, such as a line 0.4m long, at the bottom of each line drawing so that the dimensions are known even after reduction.

RTI photography

Instead of making rubbings, the use of RTI (Reflectance Transform Imaging) photography involves no touching of the surface of the stone and so is much better for conservation. The use of many images taken with the camera always in a fixed point on a tripod can produce very effective results, though it is both time-consuming in the field and some freeware software needs to be downloaded and mastered for the processing and image viewing to take place. Separate advice documentation has been produced for this method, which is available as a separate downloadable file. This method is to be preferred over rubbing as it does not damage the surface of the stone and produces high quality products in cases where rubbings would be effective, but also in many other cases such as those with deeply carved features. More details of the method can be found in these freely available publications:

H. Mytum and J R Peterson, 2018 The Application of Reflectance Transform Imaging (RTI) in Historical Archaeology, *Historical Archaeology* 52(2), 489-503.
Open access at doi:10.1007/s41636-018-0107-x

H. Mytum, K. Chapman, J.R. Peterson and A. Cross 2017 Reflectance Transformation Imaging (RTI): Capturing Gravestone Detail via Multiple Digital Images. *Association for Gravestone Studies Newsletter* 41.2, 3-10. Open access at <https://livrepository.liverpool.ac.uk/3009787/>