

Guidance Sheet No. 9: PHOTOGRAPHING ROCK ART

The Photography Recording Form

Form RF3 should be used in the field as a guide, and to keep a record of the images you take of each panel. Where photography is carried out on a different visit to the main recording, the grid reference provides a double check that the correct panel has been identified. The ERA filenames and the filenames of stitched panorama images should be added after the data has been down-loaded and/or processed (see *Guidance Sheet No. 12: Data Management*).

Image Format

Set the camera to take imagery in RAW + JPEG format. This will allow the maximum amount of data to be captured in the photos for post processing, in addition to minimising data deterioration which can occur in the JPEG format. If the imagery is being captured with a camera which can just shoot in JPEG format, then set the image to the largest size and best quality

What photos to take

For each panel, take the following:

- A photograph from each cardinal point (N, S, E, W) looking towards the panel with the north arrow, scale bars and IFRAO scale in position. If shadows are cast onto the rock, the directions the photos are taken from do not need to be exact
- A vertical photograph from directly above the panel
- A fixed orientation vertical photograph with the N – S axis identified. Note: To be tested later, not required in the trial phase
- Close-up shots of unusual motifs, natural features or damage
- 'Landscape' photographs showing the view over the panel towards the horizon in each direction. These should capture the context or setting of the panel
- At least one good quality photograph without scales for the website 'gallery'
- Team shots of recording taking place (taken occasionally rather than every panel)

Please think about the shots you take and go for quality rather than quantity, and use other factors such as lighting effects to capture a good photo. Bear in mind that the light at the end of the day is better than at the middle of the day, so you may want to take all your good photos at the end of the day or return to the site when the lighting conditions are better. Refer to *Guidance Sheet No. 4: Preparing the Panel* for more tips. **Please do not take more than 30 images for each panel!**

Note: although photographic documentation of rock art is essential, storage of large image files is costly and care should be taken in selecting shots.

Scale bars and North arrow

Each team will be issued with 2 x 0.5m, 1 x 1m scale bars and a north arrow. The scale bars should be placed at right angles to each other, with one face-on to the direction of the photograph. Where only one scale is used, this should be placed face-on to the direction of the photo. In addition a north arrow should be placed in the photographic frame, taking care not to obscure any details on the rock surface.

For good records:

- Try and remove all bags, people, etc from the shots.
- Try not to get your feet, arms, hands etc in the shot.
- Remember to put the photo scale(s) where they're clear but don't dominate the photo. For large-scale photos use a ranging pole. For detailed photos use a small scale.
- Try not to get your own or anyone else's shadow across the rock.
- For vertical and orientation photography, ensure the panel fills most of the image. If the panel is small move closer to the stone to take the image.

Lighting your shot

- Try to photograph the carvings in low (morning or evening) sunlight, without the automated flash. The oblique light will throw deep shadows across carvings that are almost invisible at mid-day.
- The effect of oblique lighting is even more apparent when the carvings are wet. An ideal scenario would be low sunshine following a shower.
- Sunlight can also cause problems by casting partial shadows (e.g. of tree canopy) onto the carvings. Try and get the light consistent on the rock surface. If it's partly cloudy, find the best angle for the shot and wait for the sun to come out.
- A reflective material such as a space blanket can be used to increase the light on the carvings, or a shade cloth (or umbrella!) can be used to block unwanted light.
- For carvings on vertical or near-vertical surfaces, try to work out in advance when they will be in sunlight
- Where there is little natural light (e.g. in woodland) a strong torch can be used to provide artificial oblique lighting to good effect.
- If you fancy a 'night hike', photography using an artificial light source and a long exposure (bulb) time on the camera (mounted on a tri-pod and using the self-timer to minimise camera shake) can produce excellent results.
- If you have a remote camera flash, positioning the flash near the stones surface to create oblique lighting can also produce excellent results.

Important: Note all the photo number(s) for this panel on your Photography Recording Form. This is vital for keeping track of the photos.

Panoramas

For each site, take a 360° panoramic photograph. Where carvings are closely grouped there is no need to take a panorama for each individual panel; one may be sufficient for an area. Only take additional panoramas if the surrounding landscape and distant view is significantly different between panels.

Setting up the shots:

- A tripod should be used to ensure the camera stays on the same horizontal plane
- Ensure bags and people are out of shot
- Position the camera to take in at least one carving, preferably with motifs visible.
- Place the North arrow in view or use a scale bar / ranging rod to identify the north position. This will also aid the stitching process and ensure that only a 360 degree view is taken.

Taking the pictures

- Follow the guidance of the camera manufacturer for camera settings and taking the pictures. This will usually involve the taking of 7-12 individual images in a clockwise direction. Although more overlapping imagery may be required for panoramas created using Photosynth.
- Start with the first shot pointing North with a scale bar, north arrow or ranging rod in view. This will enable you to judge when you've completed the full 360° sweep.
- If possible, avoid direct sunlight into lens, as this will result in lens flare and distinct contrast between stitched images

Processing of images

- Panoramas will be created using Microsoft Image Composite Editor (ICE), which is free software and can be downloaded from <http://research.microsoft.com/en-us/um/redmond/groups/ivm/ICE/>.
- Guidance on creating panoramas can be found within the ICE application. Ensure the panorama is saved in the .spj format

Further information

Further details and diagrams are available in the *CSI Photography* presentation, which can be found in the *Volunteer Info* section on the CSI blog.