



UNIVERSITY OF  
LINCOLN

# Conservation Unit Laboratory Record Card

UL No. 17 / 033

Object Name: Ceramic plate

Owner:

Owner's No.

Treatment Instructions: Disassemble the plate. Clean the plate. Re-bond the plate. Fill and retouch any missing area.

## Description

### Materials.

The plate was identified as a porcelain, a high fired ceramic. Porcelains are usefully made with a combination of kaolin, feldspar and quartz.

The floral designs on the plate were hand painted with enamel.

The gold design on the plate was gilded with gold.

The plate was glaze crating glossy effect. Glazes are usually made of a combination of silica, alumina and flux.

### Dimensions.

Diameter: 21.8cm, Circumference: 68.5cm

Foot-rim diameter: 12.2cm, Foot-rim circumference: 38.5cm

Height: 2.4cm

Weight: 343g

### Construction / manufacture.

Date of production: between 1813 and 1822

Place of production was probably from either Swansea or Nantgarw in the south of Wales.

### Historical / cultural background.

From observing the plate designs it is likely that the plate was from south of Wales.

Swansea porcelains were produced between 1814 – 1822. Nantgarw porcelains were produced between 1813 – 1814 and again between 1817 – 1822.



Figure 1: Front side of the plate.



Figure 2: Back side of the plate

## Condition

### Structure.

- The plate was previously restored by bonding the broken pieces together with epoxy adhesive.
- The plate was broken into 4 pieces.

### Surface.

- There are some staining and discolouration.
- Some of the gilded areas have faded off.
- Some dirt and dust collected over time.

Student:  
Sheleg Geva

Date allocated:  
29/09/2017

Date treatment finished:  
20/12/2017

Owners' copy, tick  
when done.

Status after treatment, tick as appropriate.

Unfinished.

Finished,  
ready for return, ☒

### Treatment.

- The plate was first clean with Synperonic A7.
- Then the plate was disassemble by placing cotton wool that was soaked in acetone along the bonding line. Plastic warps were put on to cover the areas where the cotton was placed to preventing the acetone from evaporate too fast. This process was done under a fumed cupboard. After an hour the cotton wools were removed and the pieces came apart easily.
- The plate was cleaned with steamed cleaner.
- There were still surface staining on the foot rim of the plate, so it was cleaned with Biotex and Calgon solution. The solution was prepared by mixing 1 tablespoon of Biotex with 1 tablespoon of Calgon and adding water until it become a toothpaste-like paste. The paste was put on the foot rim and was then cover with plastic wrap to preventing it from drying too quickly. After one hour and a half the paste was removed.
- Then all the pieces were cleaned again using steam cleaner.
- The plate was then bonded using Araldite 2020. This process was done by first taping all the pieces together using magic tape. The magic tape was cut on a tile using scalpel to make thin long strips. The stripes were taped on both sides of the plate in a stitch-like pattern. Then the Araldite 2020 solution was put on along the broken line using cocktail stick to apply the solution. The adhesive was allowed to dry for a week. The excess adhesive was then removed using scalpel and cleaned with acetone.
- There were some small missing areas that needed to be filled. These areas were filled using Hyxtal. The Hyxtal solution was mixed with fumed silica. It was also tined to match the colour of the plate by mixing zinc white, Cerulean blue, yellow ochre and raw umber. The solution was filled on the front side first. The remaining Hyxtal solution was kept in a refrigerator to slower it from drying. After three days when the filler on the front side dried the plate was turned over and the Hyxtal solution was filled in the missing areas on the back side. When all the filling has dried it was smoothen using abrasive paper.
- The filled part that connected with the painting or gilded detail were retouched. For the gilded detail the fill was retouched using golden acrylic in the colour of gold (deep) mix with a little bit of black. The floral painting detail was also retouched using golden acrylic in the colour of yellow mix with zinc white and the other part was retouch using the colour of mars yellow mixed with zinc white. All the filled and retouched areas were then glazed with porcelain restoration glaze (gloss).
- To finish the treatment the plate was cleaned with Synperonic A7.

### Results of analysis / tests.

The adhesive has been tested on which solvent it will dissolve. Adhesive samples were taken from the object with a scalpel. It has been tested in water, warm water and acetone. The result is it dissolved in acetone.

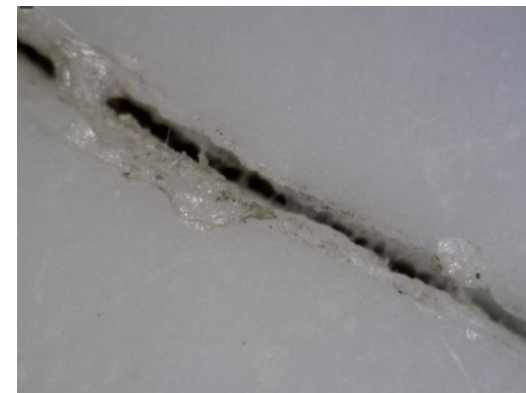


Figure 3: Old repaired bonding (X400)

Porcelain was identified as the plate is translucent when held again the light. Another identification was observed after disassembling the plate, which reveals the plate body that was white and non-porous.

### Aftercare/Environmental Recommendations

- The relative humidity it should not fluctuate more than plus or minus 5%.
- The object should be kept in a stable cupboards or shelves and that is easily accessible.
- The stored or displayed area should be line with non-fibrous padding such as polyethylene foam sheeting.
- The object also need to be protected from collecting dust and dirt to reduce the need of cleaning.
- When handling latex gloves is recommended.