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Object Title: Diagram of Sludge Digester Tanks on Thames Water Site

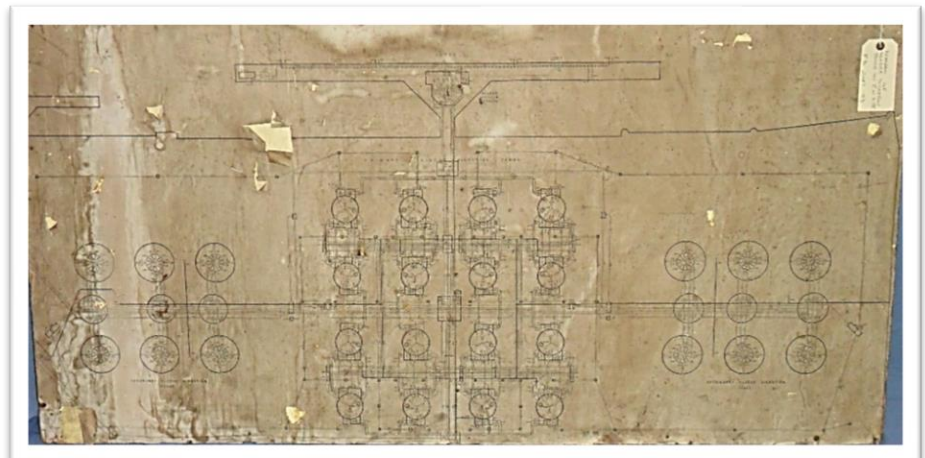
Object Description: Diagrammatic representation of part of the processing plant on the Thames Water site at Crossness, which was built in the 1950s. The diagram is mid-20th century, and printed ink on cotton.

Presentation

This large size print (approx. 1m/1.5m) on cotton was glued using animal glue to a support made from hardboard which in turn was nailed (through the cotton) to wood. Around the nails, the fabric is torn which has developed holes. Holes are present throughout the print, some due to mechanical forces, others made by insects. Water damage is extensive, the print presents water stains throughout and in some places the ink has faded. There is also an area of profound water discoloration consistent with water ingress for a prolonged period of time. The print doesn't present any creases, thanks to it being displayed on a support. It is however very brittle, like a dry leaf in autumn.

The piece presented various conservation issues:

- Water stains (impossible to remove)
- Dirt and dust deposits throughout
- Holes
- Tears
- Glue stains and deposits
- Rust stains
- Discolorations
- Dissipated ink
- Mould present
- Insect droppings stains



Intervention

I have started the intervention with the removal of the dust deposits by brushing firstly with a large brush, then small and fine ones.

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Next, a solution of ethanol and distilled water was made (1:1) and tested on the bottom left corner. The fabric reacted positively. Unfortunately the dirt was ingrained so deep one wash wasn't enough to lift it. I used cotton buds and cotton pads infused with the cleaning solution and gently rubbed on the surface a number of times before the cotton came clean. It's a very time consuming process and I was concerned with the dirt present on the harboard underneath the print that was transferring to the cotton, now that a wet agent was involved. I decided that the best approach would be to remove the cotton print from the support. This was a very precarious process due to the presence of the animal glue and the fragility of the print material. In order to remove the animal glue, it was necessary to decompose the solid state of the glue and turn it back to its powder state, and for this I needed to use a steamer. We don't have a steamer at Crossness, so the next best thing was steam from small amounts of boiling water, dabbed onto the surface. Of course, this entails more water stains, but after running a test with bleach and distilled water solution (very diluted 5-10%), the stains lifted. The whole print was dotted with these areas of animal glue which held it in place, it was a very long and tedious process but I have managed to lift the print off of its support after removing the glue and nails. I could now continue cleaning the surface.



During this steam treatment and cleaning process I observed that the ink is fading in some areas which will need addressing at the right time towards the end of the restoration process. I will retouch it using museum ink, specially developed for this purposes.

As of now I have cleaned about 15% of the entire piece. I have had to pause this restoration work due to the Coronavirus quarantine and lockdown restrictions. I very much look forward to returning to the trust and continue restoring this artefact to the best possible condition.

The next step will be repairing the holes which will be done with patches (sewn and glued) and reinforcing the structure of the print by lining it with a cotton support. Then the piece will be placed back on a wooden frame, with staples attached to the lining. Retracing the ink will probably be the last intervention if everything goes to plan.

This piece has given me a lot of personal satisfaction already and I am very pleased to have been invited to restore it back to its best possible condition which it deserves. I would like to give my appreciation to my colleagues, Alex and Rob, who have been very supportive and helpful and wish everyone a happy and safe time at home.



Octavia Forster, Textile Conservator