

# COMPLETION REPORT

Client : **XXXXXXXXXXXX**

Project Brief : **The Repair / Relining of a Concrete Sump Located on the 27<sup>th</sup> Floor**

Site Address : **XXXXX Tower  
Manchester**

Site Contact :

System Spec : **3M Scotchkote™ 165PW**  
(Formerly Known as COPON Hycote 165PW)

Film Thickness : **1000 Microns**

Covac Supervisor : **Carl Broadley**

Completion Date : **20<sup>th</sup> March 2009**

Compiled By : **Adrian Emmett**

Covac Ref : **827**



# SUMMARY OF WORKS

## The Brief

1 No. concrete, cooling tower sump located in a dedicated plant room at the top of XXXXX Tower and accessed by a lift and stairs.

The sump is sized at approximately 12M x 12M x 0.9M high and also has 2 No. divisional, concrete walls, which effectively 'split' the sump into 4 No. sections. Each of these 'divisional walls' is approximately 3M high.

The internal surfaces of the sump (the floor and first 0.9m of the internal walls) had been previously lined with a non (WRAS/DWI) approved bitumen based asphalt, whilst the top (approximately) 2m of the internal divisional concrete walls had been coated with an unknown paint which was showing signs of 'blistering' and general deterioration.

The bitumen based asphalt had reached the end of its useful life due to two fundamental reasons:-

1. Non compliance: - Bitumen has been a prohibited material in water systems of this nature for many years now by WRAS (Water Regulations Advisory Scheme). As such, there is a risk that if left untreated, the internal surfaces will continue to be at risk from bacterial growth including Legionella, Pseudomonas and Biofilm; this can lead to further deterioration in the tank's surface structure and contamination.

We are all now under an obligation to ensure that water retaining structures comply with the practical guidance of ACOP L8 and subsequently, utilize products that comply with WRAS / DWI Regulations and, therefore, maintain "the cleanliness of the system and the water in it" and avoid the "use of materials that harbour bacteria and other micro-organisms or provide nutrients for microbial growth".

Prosecutions have been taken under the Health & Safety at Work Act 1974 and under the Control of Substances Hazardous to Health Regulations 1988. Therefore compliance is essential.

2. Material Failure: - The existing Bitumen Asphalt had failed to the extent that water was ingressing significantly through the Asphalt and 'tracking' through the ceiling below in numerous areas; which could have potentially cause catastrophic problems with (for instance) the lift's electrical switch gear.



**External views of the Building**



The following images show external views of the Sump.





The images here show the damaged caused due to the floor of the Sump leaking onto electrical switchgear underneath the Sump area, onto the level below.





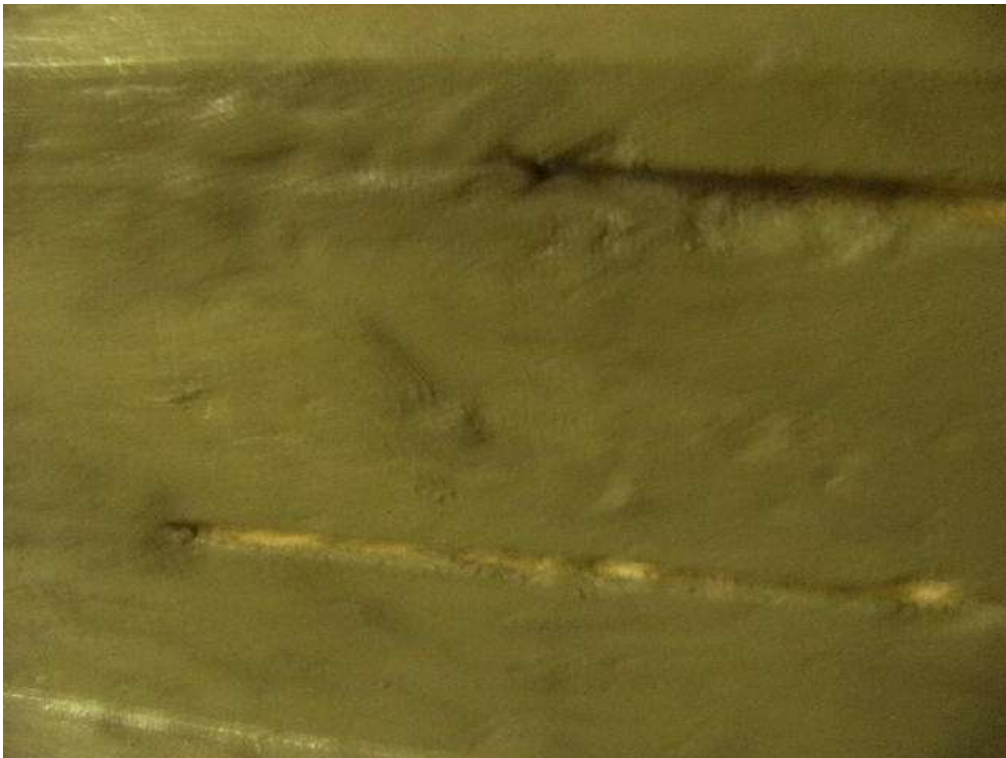


**Prior to the relining works commencing the louvre doors surrounding the Sump were first removed by COVAC Operatives.**



**These images show the Sump area having been drained and the asphalt being removed.**





**These images show the joints being filled with a two component polymer modified cement based fire reinforced concrete waterproof repair mortar, prior to being coated with COPON Hycote 165PW Clear Sealer.**



**These images are showing 3M Schotchkote 165PW Clear Sealer being applied.**



**Images showing the first coat of 3M Scotchkote 165PW (cream) being applied.**



**These images show the second coat of 165PW (grey) prior to the external louver doors being replaced.**

