



# To Replace or Refurbish a Water Tank - the best way forward

## A considered opinion from the ATCM

**Complete replacement is the most appropriate and positive resolve for a tank that is not structurally sound.**

**A tank requiring repair and considered to be of sound construction could be refurbished by the installation of a Butyl lining.**

**For tanks with heavily corroded internal and / or external surfaces great care requires to be exercised to ensure the integrity of the vessel is intact and worthy of remedial work.**



Experience has shown that repair and refurbishment of a tank in-situ can be the most costly and disruptive method in returning the downstream supply system to full operational service.

Legislative requirements dictate that as soon as an existing tank is touched for repair it must be returned to service fully compliant with current Water Regulations. Old tanks generally don't have appropriate covers or lids and are not fitted with Screened Overflow and Warning Pipes that are sized or positioned appropriately. All these non-compliant items require replacing or correction.

A severely corroded tank is not going to be satisfactorily repaired simply by fitting an internal lining system, as this adds no structural strength to the structure.

Tank repair systems that involve the application of paint or polymer impregnated coating materials require the use of specialist equipment and handling techniques due to their volatile and hazardous nature during their application in compliance with strict Health and Safety regulatory requirements for "on-site" environments.

Surface preparation is paramount as is a controlled environmental temperature and set time period to ensure the lining materials are fully cured prior to returning the tank to service. Sterilization of the vessel and downstream pipe-work is a must. Generally a period of 4 to 5 days is required to elapse following the completion of the works before it is possible to return this type of refurbished cistern or tank to service.

The cost of correctly conducting repair works in compliance with the WRAS Code of Practice – "*Repair and Refurbishment of Water Storage used for Water Intended for Human Consumption and Food Processing*" makes this a solution one of the very last resort.

Should refurbishment be considered and the tank is structurally sound, the installation of a Butyl liner would be the most positive and practical method to adopt. No need for concerns related to toxic fumes or the handling of volatile substances as the flexible liner is applied as a single sheet that adapts to the internal shape of the vessel. Reduced re-commissioning time is also an additional advantage. Checking the appropriateness of the tank fittings and updating as necessary to regulation compliance is a necessity however.

Complete tank replacement on the other hand ensures current regulatory standards are built in, modern non-corrosive materials and finishes offer reduced maintenance and a much greater life expectancy at a cost on a par with a tank that requires total repair and refurbishment.

**The general recommendation by the ATCM is that any unsafe or unserviceable cistern or tank should be replaced or where appropriate, refurbished by the Butyl liner method rather than consider any repair and refurbishment practices incorporating paint applied or polymer impregnated / reinforced materials.**

