



**RESERVOIR  
MAINTENANCE  
SPECIALISTS**

**It is important to understand the condition of service reservoirs in order to manage them effectively.**

**Inspections** build a picture of the current and future operational requirements.

**Presentation** of the data allows management to understand the issues and plan for rectification works.

**Solutions** to the identified issues aim to achieve cost effective outcomes and compliance with regulations.

## INSPECTIONS

There are many levels of inspections, ranging from the very quick, everything looks okay following a storm event, through to a structured and formalised process that looks at all the main criteria of an operational storage tank. Security, water quality, safety and structural issues all have an effect on how well the asset is performing and what maintenance will be required both short and long term to comply with regulations and public expectations.

Drones allow quick and safe inspection access to most external areas of a tank, without the need for personnel to physically climb up onto the upper areas. This is where most water quality issues occur following a storm event or security breach. These inspections can be done by the client on a regular basis as circumstances change or new information is required.

A more structured and formalised process by experienced personnel should be carried out to set a benchmark for regulatory requirements and budgeting purposes. External inspections will be looking for evidence of:

1. Contamination points caused by vandalism, unsealed or unsecured hatches, damaged ventilation, poor roof drainage or bird and vermin entry.
2. Asset defects such as concrete spalling, coating deterioration, roof sheets damaged, unsecured fixings and aerials or external cracks and leakage.

Internal areas inspected by diving can identify corrosion issues, contamination, water stagnation and sediment loadings, which all help with understanding the function and performance of the tank. It also identifies what has to be dealt with immediately or programmed into the next budget period to ensure ongoing performance and future maintenance requirements are complied with.

A detailed structural examination may also be needed when issues are discovered which require a specialist's advice and informed decisions on how best to solve the problems, based on proven outcomes.



# PRESENTATION

How the client receives the inspection information is as important as the inspection outcomes themselves. It is no use going through the process if the person reading the results is none the wiser at the end of it.

Good photography compliments written information and provides physical evidence of the issues identified.

It also allows others to make their own judgements about the validity of the inspection findings and suggested improvements.

The ASAM data base system stores and provides legacy data for the next generation of operators and management.



**MANAGING**  
TANKS  
AQUEDUCTS  
PUMP STATIONS

**ASAM MEDIA**

- ▶ SITE SECURITY
- ▶ OH&S RISKS
- ▶ WATER QUALITY
- ▶ STRUCTURAL DEFECTS
- ▶ AQUEDUCTS
- ▶ PUMP STATIONS
- ▶ VIDEO

**PROJECT MANAGEMENT**

ASAM RT incorporates a Project Management system that closes the loop between field inspections, data capture and the maintenance solutions required.

Project management is required to complete the process which commences when issues are identified out in the field, the results are passed along the management chain and then actions are planned and carried out to a successful outcome... or are they?

There is often a gap in the management process where one department has no idea of what the other is doing. ASAM RT has an integrated Project Management system that is easily created from the initial reports, which delegates responsibilities and tracks all the individual stages of the maintenance process through to completion. At any time, managers can see what is being carried out, the progress throughout various stages and which projects have stalled and for what reasons.



**AQUAFACTS**

Site records 1: Having a sequential series of photographs can assist with further assessment of a developing issue, or provide supporting evidence for the programming of rectification works.

Collecting a series of photos of the same feature/fixture from the same profile, can give a representation of the degradation or increasing severity of an issue over time.

**AQUALINKS**  
**AquaSafeSkills**  
**RE-WIREMENT**  
EXPERIENCE • ENGAGEMENT • EXCELLENCE  
**AQUALIFT**

# SOLUTIONS

Receiving inspection information is only the start of what can be a long and often costly process. People want solutions, not just information if the overall inspection project is to be effective.

The ASAM Project Management system allows inspection results to be monitored and managed through to completion of the identified issues.

Suggested solutions need to be based on long term, proven outcomes. That is why previous renovations need to be re-visited to see how they are performing over time. Photography once again will provide the evidence of continued good results or of deterioration of materials and poor outcomes from the original concepts.

The following platform concepts are based on cost effective and fit for purpose designs.

## TYPE 1 PLATFORM



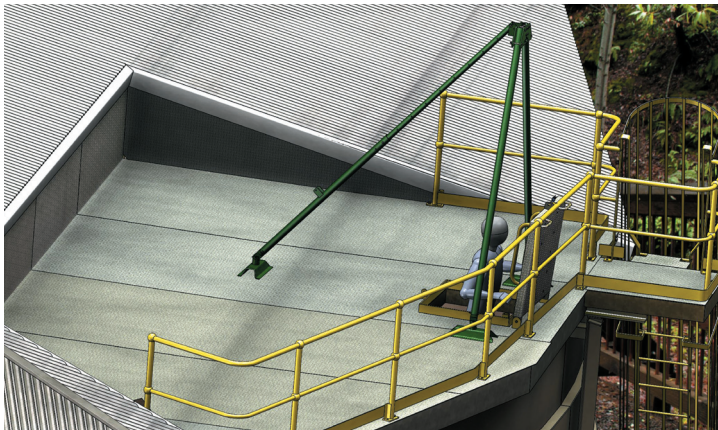
1	A Titan Arm is able to lock into multiple positions to provide anchorage for confined space access or rescue situations	7	50mm clearance under kick rail prevents debris buildup and allows effective drainage
2	Hatch cover locks into open position onto the supporting handrails	8	Guard rails extending around either side of the platform or any area used by personnel to operate or maintain the tank
3	Hand rails on the underside of the hatch cover to assist climbing down onto the internal ladder	9	Aluminium checkerplate slid under roof sheets with continuous welds on each join
4	FRP vertical ladder system attached parallel to internal wall	10	Hatch frames which fully seal onto the roof or platform with secure covers that overlap the frame
5	Entry hatch to be a minimum of 900mm wide by 1M length to allow for easy access or rescue under confined space guidelines	11	Titan Arm folded down and locked when not in use, eliminating bird roosting areas
6	Hatches to have a continuous 75mm raised edge to prevent storm water and foreign matter contaminating the tank	12	Cross section of entry hatch





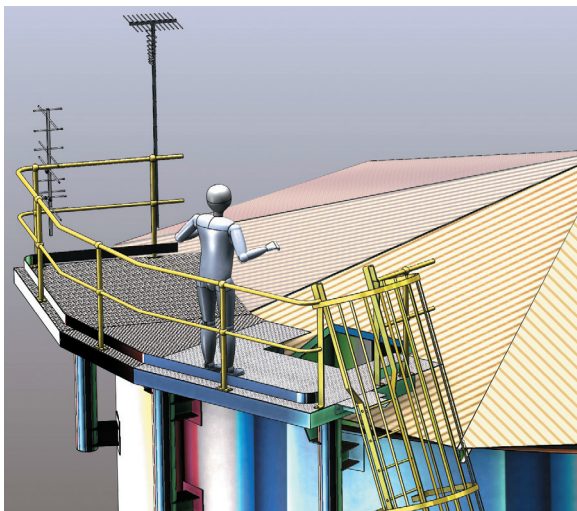
## TYPE 2 PLATFORM

Horizontal platforms that are set into a sloping reservoir roof have all the safety and drainage features of Type 1 Platform solutions.



## TYPE 3 PLATFORM

This design is for smaller tanks, with limited space on the roof area to fit a Type 1 or 2 Platform.



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RE-WIREMENT  
AquaSafeSkills