

JOB SITE



Operation, Safety, Maintenance and Repair Instructions

Self Activating Barrier



OVERVIEW

The Self Activating Barrier (SAB)'s success can be attributed to its' simple yet ingenious approach to flood defence, using the advancing floodwaters to automatically raise the barrier; effectively using the problem to create a highly effective solution.

M3 Floodtec has been installing passive, self-closing flood barriers around the world for far longer than any other company in the industry.

With a design life in excess of 50 years, and requiring minimal maintenance, the SAB is an extremely effective flood defence system. When not in use the barrier is protected underground and its seals are sheltered from the elements. The SAB offers optimal protection against extreme high water levels, and a rigorous on-going R&D programme ensures that the SAB will remain the first choice for discerning clients seeking cost effective and superior flood defence solutions for decades to come.

SAB INSTALL DETAILS

LOCATION

TYPE

PROTECTION LENGTH

PROTECTION HEIGHT

BASIN TYPE

FLOATING WALL

SERVICE PIT

COMPLETION DATE

WARRANTY

INSTALLED BY

CONTRACTOR

MAINTENANCE PLAN

It is essential to have in place a Maintenance Plan for any Self Activating Barrier (SAB) to ensure it's ready to operate to the expected standard in the event of a flood.

For the system on this project, the Maintenance Plan should include at least the following:

DETAILS	HOW OFTEN
Hydrostatic testing of each complete system from intake Structure to the SAB unit(s) by filling with a hose.	Yearly
Checking for leakage of seals at the base of the rising wall during the hydrostatic test.	Yearly
Visual inspection of seals at the ends of the flood wall.	Yearly
Testing of the submersible pump (when present)	Yearly
Testing and cleaning of the non-return flap valves in the service pit.	Yearly
Cleaning of debris from intake structure gratings	6 Monthly
Cleaning of silt in the service pit	Yearly

The frequency of testing may be modified based on experience of system operation.

Hydrostatic testing of the SAB unit operation should be carried out when there is least chance of disruption. The actual test duration is dependent on the filling rate from the water supply.

Each SAB installed system carries a warranty against fabrication faults. M3 Floodtec are only responsible for the correct working of the SAB when above instructions are exercised carefully and according to our advice.

SYSTEM COMPONENTS OF THE SAB

STEEL BASIN

The Basin is the underground structure in which the floating wall sits and operates.

FLOATING WALL

The Floating Wall raises and lowers with the flood water level. The floating wall consists of a fully seam welded and reinforced aluminium float treated with 3 coats of marine grade paint.

SUPPORT BLOCKS

The Support Block is the angled steel block which holds the wall in place when raised.

SERVICE PIT

The Self Activating Barrier unit generally requires a service pit to control the water inlet and drainage. There are two types of pit, one with a pump and one without.

Which one is needed depends on the situation where the SAB will be installed. When the level of the local storm drainage system is normally lower than the bottom of the SAB, the standard pit is sufficient to drain the SAB system. When the local storm drainage system is above the level of the service pit, a pump is always required.

The pump switches on automatically once there is water in the system and prevents the system from deploying if there is no need for it. Also in situations where water subsides slowly, the pump can be switched on once the flood is below critical level and the SAB will no longer be an obstacle.

FILLING THE SYSTEM IN THE EVENT OF A FLOOD

When there is a flood, the pit will fill up by the inlet pipe. When the flood water rises above the inlet from the service pit to the basin, the basin will fill up and the wall will rise.

DRAINING THE SYSTEM AFTER A FLOOD

Once the water level subsides to a normal level, the SAB basin is drained through the one way check valve in the pit and discharged to the chosen area.

GUIDE RAILS

The operation of the SAB relies on a guide rail at each end to seal against, under flood conditions. Where the barrier fits between two fixed reveals a steel angle is bolted to the reveal and sealed with a mastic sealant. The angle also allows the barrier to be guided when rising and falling.

TELEMETRY SYSTEMS

The telemetry system allows remote monitoring of the SAB operation. It utilises GPRS signal. The telemetry system has 2 main components: the monitoring & switching device and the logging & transmitter device.

WARNING BEACON

The Warning Beacon gives a visual indication that the barrier is about to rise.

TESTING THE SAB

The pit is connected to a suitable clean water supply either via a permanent connection or if not available, via a temporary hose, to test the SAB. The testing procedure is as follows:

- Unlock the lid of the service pit and open it.
- The valve controlling the inlet/outlet pipe connecting the service chamber to the local storm water system, must be closed.
- Fill the service chamber with water.
- When the water level has reached the top of the filling pipe the SAB wall will rise and float.
- Fill the pit completely to the top and check the SAB system (see Maintenance)

- After checking, open the valve in the inlet/outlet pipe to allow the system to drain.
- The pit will now drain completely and the SAB wall will return to its resting position.
- Close the pit again and lock the lid.

IMPORTANT: AFTER TESTING THE INLET/OUTLET PIPE VALVE MUST ALWAYS LEFT OPEN

WARRANTY

Each Self Activating Barrier installed system carries a warranty of 10 years on the manufacture, subject to adherence to the recommended maintenance schedule.

REPLACEMENT OR REPAIR

Always contact M3 Floodtec for more information if materials need replacement or repair.

SOURCES OF ADVICE

Environment Agency Floodline: 0345 988 1188

The Environment Agency operates a 24hr telephone Floodline where you can obtain up to the minute information on the flooding situation in your area.

You can also register for the Environment Agency's Floodline Warnings Direct Service. You will automatically be sent either by phone, text or post the latest information on flooding in your area.

National Flood Forum: 01299 403 055

Scottish Flood Forum: 01698 839021

CONTACTING M3 FLOODTEC

In the event that you require any additional information please contact M3 Floodtec on:

Tel: 01905 676467

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Online: www.m3floodtec.com

Our offices are open Monday – Friday
from 08:30 – 17:00



At M3 we are continually searching the Globe for new technologies and working processes that we can harness to enable us to deliver Innovative solutions that benefit the Environment and provide enhanced value to our Clients

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