

SCFB - Self-Closing Flood Barrier





INTRODUCTION

SCFB – Self-Closing Flood Barrier; a simple yet ingenious concept which uses the pressure from the approaching floodwaters to automatically raise the barrier; effectively using the problem to create the solution.

- No energy source required
- No manpower required
- Worldwide operational since 1998
- Minimal maintenance
- Minimal life expectancy: 50 years



Cockermouth (UK)

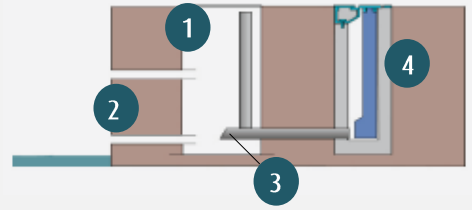




LOWERED

All components are hidden below the surface. The activation basin (1) will follow the tides through inlet pipes connected to the waterway (2).

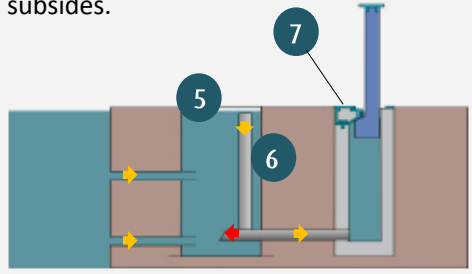
A one-way-check valve (3) prevents the basin containing the floating wall (4) from filling up with water.



ACTIVATED

When the water reaches critical level (5) the basin containing the flood wall (4) will fill up through an inlet pipe (6) connected with the activation basin. The flood wall will rise. Once raised a support block (7) will lock the barrier into position making it watertight.

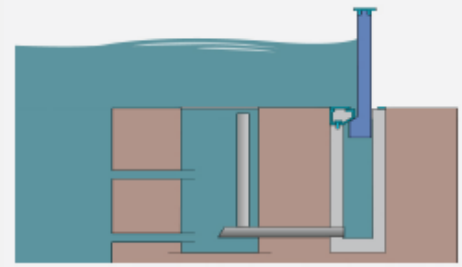
The barrier is raised before the floodwater crosses the quay and will remain in place until the water subsides.



RAISED

The floodwater can continue to rise without flooding the protected area.

When the water level subsides the barrier will simultaneously lower itself back to its resting position. When lowered the top of the barrier seals to prevent inflow of waste or debris.





RELIABILITY

The SCFB was evaluated by ARCADIS against the assessment criteria of the Dutch Water Board's guidelines on security of primary embankments, the world's highest standards with regards to mobile flood barriers.

"Results of the world's most severe tests led to the conclusion that the barriers' performance is such that it can be used as a primary flood barrier in the Dutch dyke system."

The SCFB is the best alternative when looking for a reliable, efficient and cost-effective solution where a permanent flood barrier is not possible or desired.

Carrick On Suir (Ireland)

- **Installation 2002**
- **Two tidal-river bank barriers that are activated on average 150-170 times a year.**
- **Successrate: 100%**





APPLICATIONS - Critical infrastructure (tunnels, metro systems, power stations, ...) - Waterways - Coastal defense

GENERAL

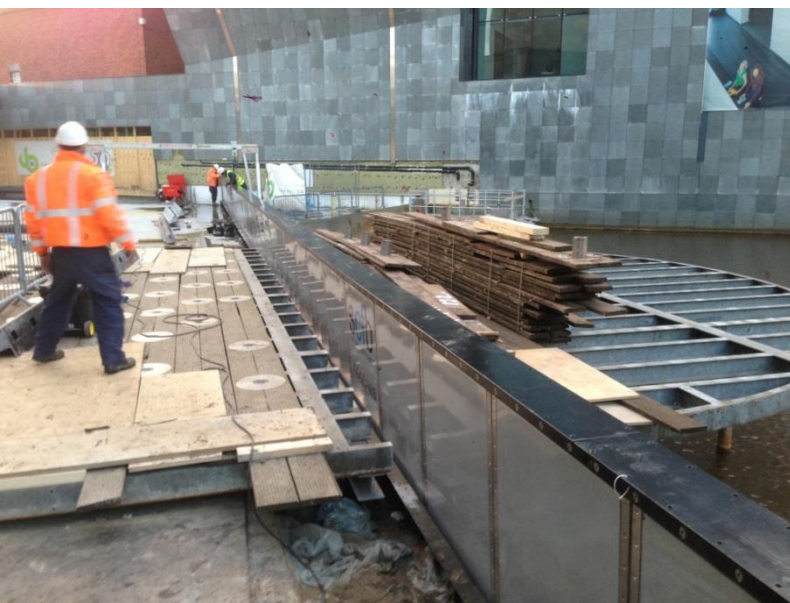
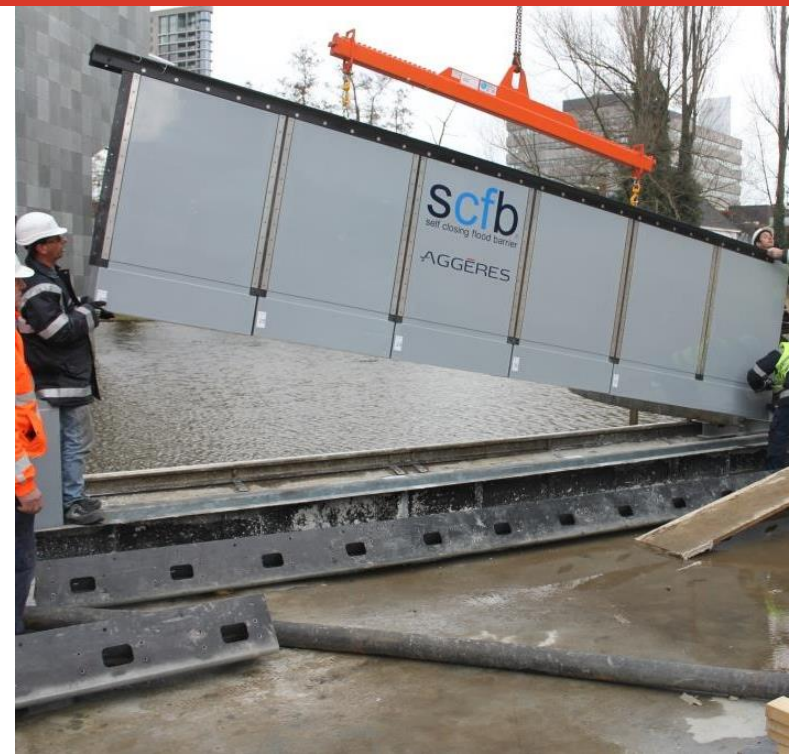
- Most reliable of all mobile flood barriers.
- 100% autonomous.
- No human intervention.
- Vandalism proof.
- Unlimited in length.
- Invisible.
- Strong; covered with Kevlar to withstand impact from debris.

ECONOMICAL

- No operational costs.
- Minimal maintenance.
- Barrier is activated only when a predetermined critical level is reached;
Fe. Roads passing through levees are closed only at the last moment.

INTELLIGENT

- **No energy source required !** Uses the floodwater to create the solution.
- Lowers itself when water recedes.
- Versatile.
- Recommended by many renowned engineering consultancy's.
- Fit & Forget.

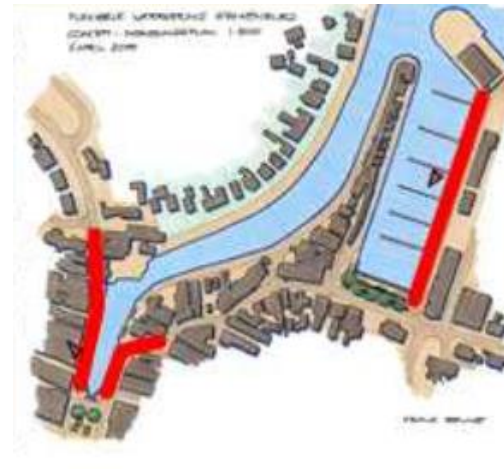




REFERENCES : SCFB Spakenburg , NL - 300 m



Client: Water Board Vallei & Veluwe. In Sep 2016 construction of the longest autonomous, mobile dam in the world commenced in the historic center of the town Spakenburg, NL. The project was delivered on time in April 2017. Building consortium: AGGÈRES NV / Van Heteren / Jansen Venneboer



REFERENCES : SCFB Spakenburg , NL - 300 m









TEST SCFB - RUSTPOSITIE



TEST SCFB - RUSTPOSITIE



TEST SCFB - ACTIVERING



TEST SCFB - KEERPOSITIE



3



1



1



2

REFERENCES Belgium

1. Schellebelle

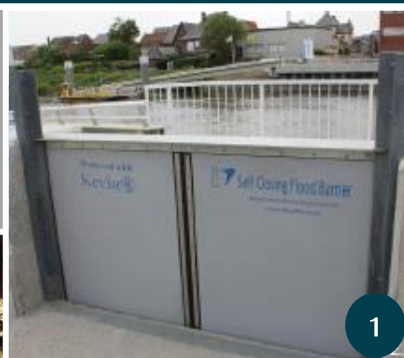
- Installation 2010
- Height 1,5m
- Length 1 x 5m and 1 x 2m



3

3. Berchem

- Installation 2015
- Height 1,25m
- Length 3,7m



1



2



2

2. Hoboken (boat yard)

- Installation 2010
- Height 1,5m
- Length 8m
- Rails permanently placed on top of wall to allow transport of boats when barrier is lowered



1



2



2



1

REFERENCES international

1. National Archives, Washington (USA)
2. Galarais Shopping Center, Monterrey (Mexico)
3. Town of Cockermouth (UK)
4. Thames Water - Pumping Station, London (UK)
5. Astellas Pharma (formerly Yamanouchi), Meppel (NL)
6. Parking, New Castle (Australia)

...



3



1



4



5



6



3



1



2

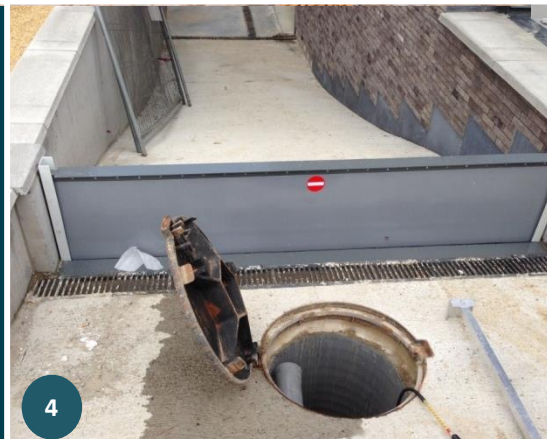


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SMALL PROJECTS (SCFD)

- connected to local drain or sewer system -

1. Garage - Knokke (BE)
2. Door - Spakenburg (NL)
3. Garage - Oostende (BE)
4. Garage - Grimbergen (BE)
5. Garage - Boulder, Colorado (USA)
6. Private estate - Freuchi Mills (UK)
7. Private estate - Paulatem (BE)



4



5



6



7



7



scan QR code for
SCFB movie

KRI-SIL



Self Closing Flood Barrier

World's most effective flood protection

AGGÈRES
Flood solutions.