ARK® FLOOD BARRIERS

affordable

Cheaper than sandbags, with a much lower labour requirement.

simple

Can be quickly and easily deployed.

sustainable

Single-use sandbags are often contaminated. ARK can be re-used multiple times.

affordable simple sustainable

Sandbags have traditionally been used in emergencies. They require a huge amount of manpower, can only be used once and carry contamination risks.

Water-filled barriers have been used all over the world for decades. They are an essential part of emergency response in North America and Europe and are proven to work.

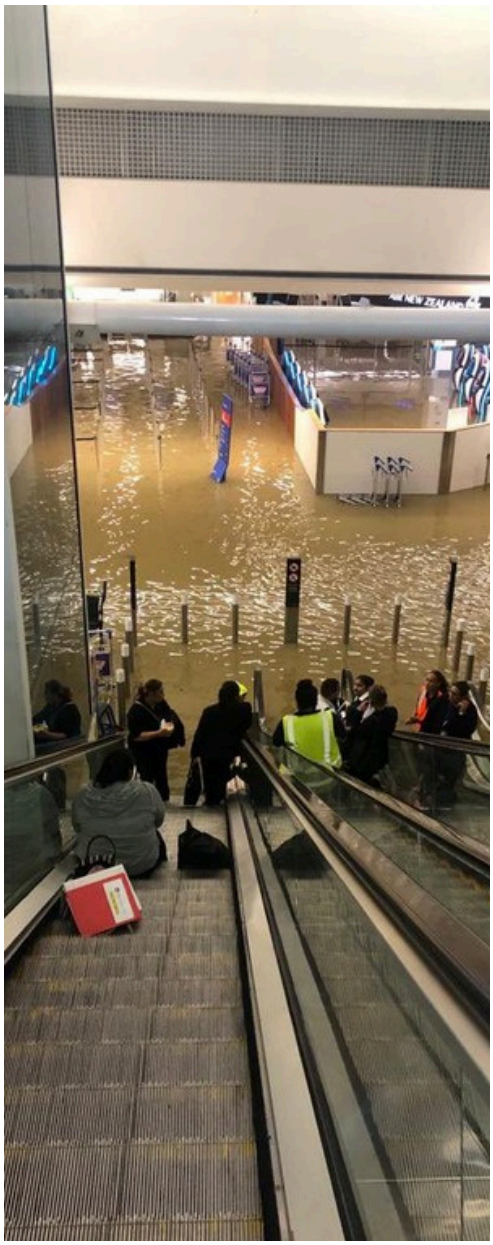
Back in 2022, watching people in Nelson stacking sandbags in the rain inspired us to find a better solution.

After extensive research and local testing, we adapted the proven global concept of water-filled barriers for New Zealand conditions, creating ARK Flood Barriers, a smarter, cleaner, and more sustainable way to manage flooding.

ARK provides an affordable, easy-to-use alternative to sandbags - a simple tool to help lessen the impact of extreme weather and flooding events.

Designed and fully manufactured in New Zealand, ARK can help central government, local government, communities and businesses to protect people, property and livelihoods from flood damage, quickly and effectively.

Fighting Water With Water



Local extreme weather and flooding events will continue to impact New Zealand, and it seems likely they will become more regular and intense.

Long-term “fixes” are complex and will take time to plan, fund and implement.

In the meantime, we believe our ARK Flood Barriers offer a great alternative to sandbags, and in fact provide a far superior barrier to water flow.

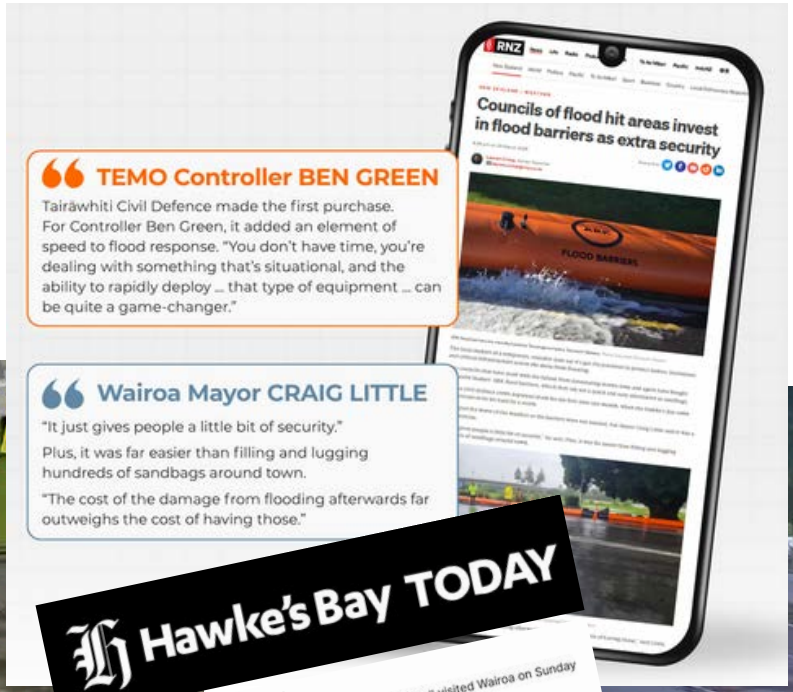
Lightweight and reusable, ARK Flood Barriers can be deployed in minutes, with no heavy lifting, special gear or machinery.

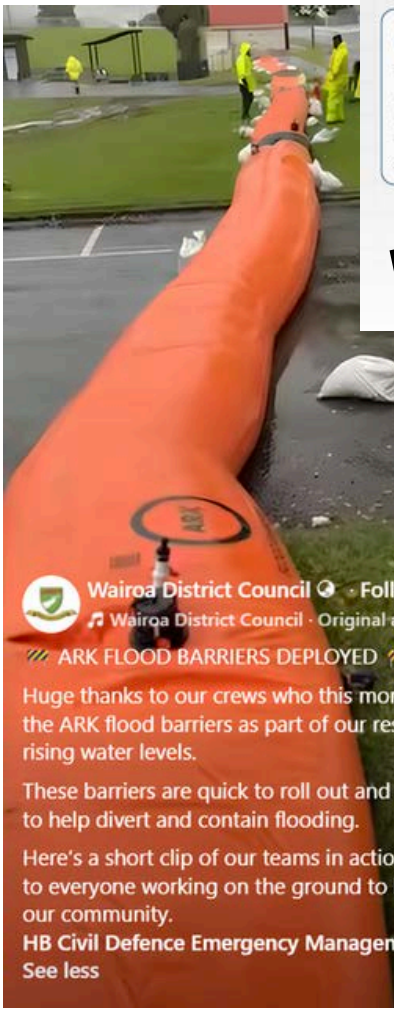
They use water to divert water, making them an essential, ready-to-go flood response tool for New Zealand communities.

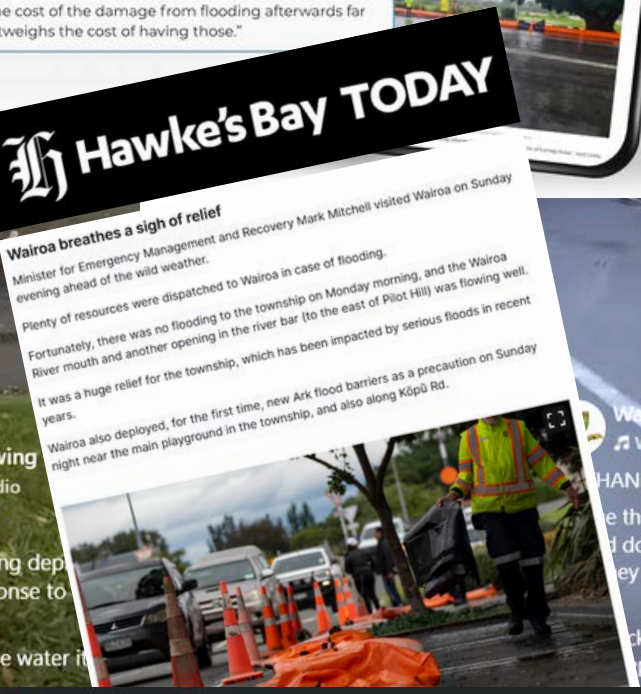
Our size means New Zealand will always have limited funds and manpower to deal with disasters such as flooding.

We need to find affordable, easy-to-use tools to help lessen the impact on people, property and our communities.

In The News


RNZ
Councils of flood hit areas invest in flood barriers as extra security
TEMO Controller BEN GREEN
Tairāwhiti Civil Defence made the first purchase. For Controller Ben Green, it added an element of speed to flood response. "You don't have time, you're dealing with something that's situational, and the ability to rapidly deploy ... that type of equipment ... can be quite a game-changer."
Wairoa Mayor CRAIG LITTLE
"It just gives people a little bit of security."
Plus, it was far easier than filling and lugging hundreds of sandbags around town.
"The cost of the damage from flooding afterwards far outweighs the cost of having those."


Wairoa District Council · Following
Wairoa District Council · Original audio
ARK FLOOD BARRIERS DEPLOYED
Huge thanks to our crews who this morning dep
the ARK flood barriers as part of our response to
rising water levels.
These barriers are quick to roll out and use water i
to help divert and contain flooding.
Here's a short clip of our teams in actio
to everyone working on the ground to
our community.
HB Civil Defence Emergency Manager
See less


Hawke's Bay TODAY
Wairoa breathes a sigh of relief
Minister for Emergency Management and Recovery Mark Mitchell visited Wairoa on Sunday evening ahead of the wild weather.
Plenty of resources were dispatched to Wairoa in case of flooding.
Fortunately, there was no flooding to the township on Monday morning, and the Wairoa River mouth and another opening in the river bar (to the east of Pilot Hill) was flowing well.
It was a huge relief for the township, which has been impacted by serious floods in recent years.
Wairoa also deployed, for the first time, new Ark flood barriers as a precaution on Sunday night near the main playground in the township, and also along Kōpū Rd.


Wairoa District Council · Following
Wairoa District Council · Original audio
HANK YOU
e thank you to the hardworking crews who
down Council's ARK flood barriers this morning
ey were deployed for the weather event here in
k response, professionalism, and teamwork
p our community safe and get things back to
othly as possible. We truly appreciate
and effort that goes on behind the
events like this.
to all crews who supported the response
dication to Wairoa does not go
less


Sam Uffindell MP is in Tauranga.
17 February
Tarpaulin Makers BOP have developed these incredible flood barriers as an affordable, simple and sustainable alternative to sandbags.
Fully manufactured in Mount Maunganui using locally compatible fillings, the large PVC tubes can be filled with water, making them strong and heavy enough to mould to the ground and divert water flow. The tubes can be deployed in minutes and are reusable.
There is significant opportunity for this awesome local Tauranga company to provide local government with a superior fast deployment solution to protect buildings and infrastructure during extreme weather and flood events.
Thank you for having me yesterday Beni and Klint, keep up the great innovative work!

Key Features

Affordable

Cheaper than sandbags, especially when covering large areas.

Simple

Quick to deploy, with no heavy lifting or special gear required.

Sustainable

Reusable and clean, leaving no mess behind after use.

Easy to Deploy

ARK Flood Barriers can be rolled out, relocated as needed, then filled.
They work in straight lines or curves.

Proven Design

Based on products used internationally for emergency response, construction and dewatering.

Locally Made

Fully manufactured in New Zealand, using locally compatible fittings.

Selected sites can be quickly encircled, ensuring safe gathering places or protection of key locations, such as:

Community Spaces
Marae; Schools; Community Halls; Sports Grounds and Facilities;

Protect gathering areas and local facilities

Key Infrastructure
Hospitals; TelCos; Power Stations

Shield critical assets

Connectivity
Roads; Rail; Bridges; Airports; Ports

Safeguard transport networks

Agriculture
Stock; Farm Equipment; Feed

Protect equipment, livestock and land

Commercial/Retail
Businesses; Factories; Malls

Keep essential workplaces and services functioning

Construction
Projects; Worksites

Create dry, safe work areas through dewatering or water control

Residential

Protect homes, garages and property from rising water

Some Technical Info

General Background

Based on established international examples, Tarpaulin Makers developed ARK Flood Barriers specifically for New Zealand conditions, as an affordable, simple, sustainable and reusable alternative to sandbags.

Fully manufactured in New Zealand, using locally compatible fittings, ARK comes in 14.5 metre lengths, making it cost-effective and easy to lift and deploy.

ARK can be deployed in minutes, making it an essential and reusaboe resource in most potential flooding situations. The individual barriers can be easily joined together to create one continuous barrier to water, and work in straight lines or curves.Once filled with water, the barriers mold and seal to the ground making them heavy enoughto either stop or divert water flow.

And, once the flood risk is over, ARK Flood Barriers can be emptied, rolled up and stored for next time.

Design

By design, each ARK Flood Barrier is an incredibly stable unit which won't move because any force applied is transferred through the water to the other side of the bladder. Here's why it "stays put".

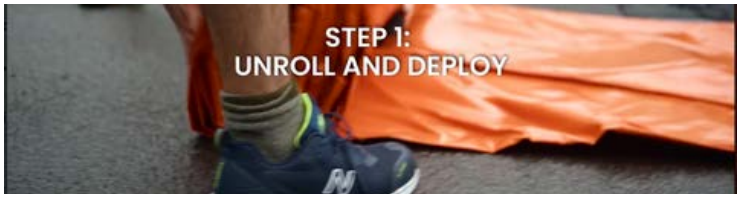
Pressure Distribution: according to Pascal's Principle, when you push on a confined fluid, that pressure change is transmitted equally in all directions. The water isn't just a solid block being pushed; it's a medium spreading your force to every square inch of the bladder's internal surface.

Opposing Forces: as you push one side "in," the pressure increases everywhere inside. This causes the other side of the bladder to push "out" against the ground or the air. If the bladder is sitting on a surface, the friction and the weight of the water (gravity) anchor it down.

Internal Divider: a single section (one solid bladder) will not slide sideways even if water on one side is flowing over the top of it however they can be prone to roll away from a building force of water. With the internal divider, ARK is essentially two bladders side-by-side. To make ARK roll, one bladder must be lifted over the other - this increases the waterhead or downforce and keeps it locked to the ground.

Main Body

- ARK is manufactured in modular sections, using heavy duty 680-720gsm PVC for excellent strength, wear and UV stability.
- Construction is fully welded - a very strong 100% sealed joining system.
- The design incorporates a central baffle system, essentially making ARK a two-part system, creating a very stable unit that will not roll when side-loaded as a single cell would.
- Designed to be approximately 800mm wide by 500mm high when in its placement (full) state.
- When longer lengths are required, ARK sections are designed to quickly and securely link together with a simple and strong two clip system. The joins are then wrapped with a joiner cover.
- Fully deployed volume is approximately six cubic metres / 6000 litres of water.
- Packed down weight is 44 kilograms, including joiner cover. Packed down size is 1200mm long by 500mm wide by 250mm high.
- Eight ARK units pack down and store as 1.2 cubic metres. This quantity of ARK once deployed is equivalent to 116m of lineal coverage or, for the sake of comparison, 1180 sandbags.
- Each ARK section has a QR code that links through the TarpMakers website and a deployment tutorial video.



Hardware and Fittings

Top Fittings

(Two sets per section - one set at each end)

Top main filler point is an 80mm Polyethylene Hansen tank fitting with an internal (female) BSP thread. A female 80mm Camlock fitting, with sealing plug, is fitted to the tank fitting.

Top small air bleed/home hose filler point is a 20mm Polyethylene Hansen tank fitting with an external BSP thread.

A 20mm ball valve is fitted to this, then a standard New Zealand house hose “snap” fitting is fitted.

Lower Fittings and Joiner Clips

Lower side empty/bleeder points are a 25mm Polyethylene Hansen Tank fitting with an external BSP thread. A 25mm Camlock fitting, with sealing plug, is fitted to the tank fitting. This can have an extension hose plugged in for draining if required. (Two per section - one each end.)

The joiner clip assembly is a combination of stainless steel snap hook to triangular “D” ring for an extremely strong, very quick, simple, solid join solution. Sewn to a robust lug then welded into position. Each section has two joiner sets one at each end.

The black outer joiner is manufactured with the same heavy Ripstop PVC as the main ARK body, designed to wrap-around the joined ARK sections to assist with the sealing value of the barriers.

Flat dimensions are 2300mm (circumference of ARK) by 1970mm, joined with a quick and strong double system (#10 YKK zip and 50mm velcro flap).

Each ARK Flood Barrier is wrapped with a 50mm Polyester packing strap, with 50mm side release adjustable buckle.

Site Preparation and Deployment

Site Prep

Before deployment, identify your flood protection area and clear any large obstructions such as rocks, branches, or debris.
A smooth surface ensures a tight, secure seal once the barriers are filled.

Unroll and Deploy

Remove ARK from its bag or release the storage strap. Unroll it along the chosen line, either straight or in a curve, depending on your site layout.

Ensure the large 80mm tank fittings are positioned at the top of each section before filling.





Filling Your ARK

Before filling, check that the two bottom base valves are closed and the four top tank fittings are open.

Always start filling from the lowest point if the ground is sloped. Fill until water exits from the opposite end, then close all valves and apply caps to seal the water inside.

Double-check that all top and bottom valves are closed before moving on to the next section.



Connecting Multiple Sections

If using multiple ARK sections, place joiners roughly one metre beneath the first barrier before filling.

Roll out the second section end-to-end. Secure the two clips together at the bottom edge to eliminate gaps when filled.

Wrap the joiner around both ARK sections and zip together securely.



Emptying and Storage

Once floodwaters recede, open the lower valves to drain the water gradually. Reuse the water for non-drinking purposes such as cleaning or irrigation.

Rinse and wipe down the exterior of the barrier, removing any mud or debris, and allow it to dry completely.

Roll the ARK back up, secure it with the storage strap, or place it into its supplied bag for future use.

TARPAULIN MAKERS

Tarpaulin Makers (B.O.P) Limited | 0800 827 762 | tarpmakers.co.nz

For more information about ARK Flood Barriers
please go to **https: //www.tarpmakers.co.nz**

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