

BARRIER BOOM FILTER WALL

DES Barrier Filter Wall system is recognised as a complete secondary containment solution which captures hydrocarbons while allowing water to flow through the system.

The **Barrier Filter Walls** are constructed from new generation geotextile fabric which contains a proprietary blend of oil solidifying polymers. The polymers encapsulate hydrocarbons, solidifying them upon contact. As the hydrocarbons become more concentrated the solidification rate increases reducing water flow through the Barrier Filter Wall.

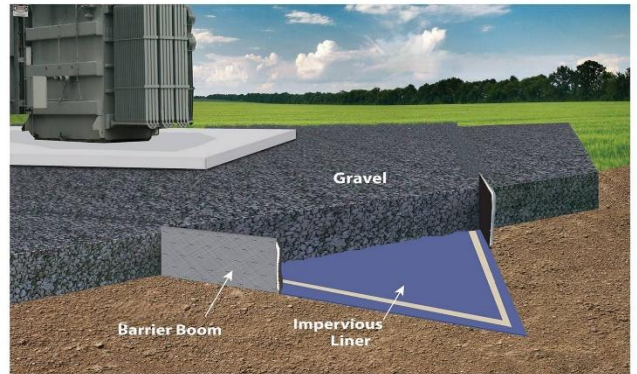
In the event of a sudden hydrocarbon release, or when complete solidification has occurred, the Barrier Filter Walls becomes completely impervious to all flow preventing hydrocarbon release into the environment.

The Barrier Filter Wall is an accepted alternative to traditional bunds, providing a complete secondary containment solution; chosen by professional engineers, major companies and end users. The Barrier Filter Walls is able to comply with AS2067, AS1940 and is certified in accordance with USA Spill Prevention, Control and Countermeasure (SPCC) CFR 40 Part 112 regulations.

Barrier Boom Filter Walls are custom built to suit site requirements, capacity and major storm events. They can be used as a complete replacement, retrofitted, or adapted to existing traditional bund systems in conjunction with suitable impervious liners

Barrier Boom Filter Wall forms part of the bund wall and is fully welded to the impervious liner floor providing complete hydrocarbon containment or can be used with Clay Based Liners

DES Barrier Boom Filter Walls (Previously CI Agent) have been installed in various locations in Australia and Internationally:



Large above ground storage site



Start



Finish

Barrier Filter Walls are currently in use in the following applications:

- Substations brownfield/greenfield installations
- Depot and site hydrocarbon storage
- Bulk fuel facilities
- Marine Ports and waterways
- Wind Farm/Solar pad-mounted transformers.
- Groundwater catchment areas
- Wash-down bays
- Battery Powered Storage Sites

Product Advantages

- Low cost to traditional bunding applications
- Gravity flow, no pumps or electric valves
- Below ground (no trip hazards and full access)
- Designed to meet your site's needs
- Little or no maintenance require
- Premanufactured for faster install time and onsite costs.
- Less land space required (small footprint)
- Reduces containment cost by 50% to 80% (on average) over alternative methods
- Eliminates the need for concrete walls, sump pump systems, oil-water separators, and pits
- Can be retrofitted to work in with existing sites and systems.
- Filters can be replaced after spill.



Pad Mount for smaller containment



Voids to increase volume and space



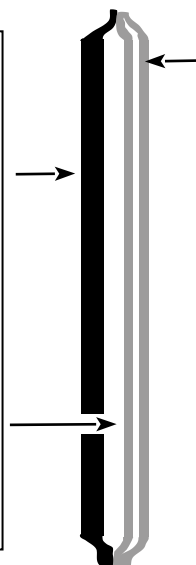
Reline and Internal Filter Wall



Gabion Bund Wall

The inside wall of our Barrier Boom is a basic geotextile made from a patented blend of recycled synthetic materials that is both hydrophobic and oleophilic. The material wicks the oil throughout its fibres and has a tremendous load capability per square inch.

Oil Solidifying Polymers is a non-toxic, nonhazardous, and environmentally friendly blend of cross-linking polymers that encapsulates transformer oils into a cohesive rubber-like mass on contact.



Agent-X makes up the outer wall of the Barrier Boom. It is made of two layers of a geotextile with our Oil Solidifying Polymers laminated between the layers. The material itself has a tremendous filtering effect and keeps oil from passing through this unique final outside wall.

A unique quilting pattern (not shown) keeps the Oil Solidifying Polymers from shifting during handling and installation.

Specifications of the Barrier Boom

Availability and Design	Custom designed and pre-manufactured offsite (reduced onsite installation)
Barrier Wall height	From 200mm
Flow rate for up to 300 mm of H ₂ O Flow Rate increases further with height	From 11-19 Lpm Per sq Ft (Non Linier) 122Lpm/Sqm (approx.)
Capacity	Solidification capability approximately 20 L/m ² with <1ppm hydrocarbon discharge (depending on oil type, viscosity and temperature)
Geotextile fabric	2000 N Burst strength as per ASTM D6241 578 N Grab strength (machine direction) as per ASTM D4632 711 N Grab strength (cross direction) as per ASTM D4632
Geotextile resistance	70% UV resistant, 80% chemical and oxidation resistance
Lining strength	Breaking strength: 51 - 54 N/mm as per ASTM D751 procedure B Tear strength: 17 - 19 N/mm as per BS 3424
Lining resistance	Abrasion resistance: >200 cycles to expose fabric as per ASTM D3389

Product Compliance

- Australian Defence Organisation recognised
- Designed to AS2067 and AS1940 standards
- Tested to ASTM D4632, ASTM D4241, ASTM D6241, ASTM D4355, ASTM D4751 and ASTM D4491 (Geotextiles)
- Tested to ASTM D3389 and BS 3424 (Lining materials)
- Meets NSW 'General Solid Waste' classification (Polymer)
- Able to meet relevant state and territory EPA requirements
- Meets U.S. EPA SPCC 40 CFR 112.7
- Meets IEEE Std. 980

Barrier Boom Availability:

Barrier Boom is manufactured to the specific requirements of the containment site.

In most cases the Barrier Boom can be delivered within two to four weeks from date of the order.

Environmental Insurance Policy: Basic Concepts USA carries a \$7 Million USD Pollution and Product Liability insurance policy on BCI Barrier Boom for some countries.