

# How our smart polymer ensures 100% effective spill control

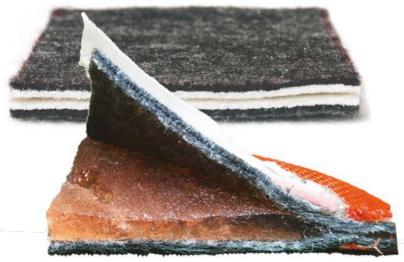


Green Rhino® has pioneered the use of smart polymer technology for spill control in the construction and utility sectors

Our proprietary CG1 polymer is uniquely effective in attracting and retaining a wide range of hydrocarbons including oil, diesel, petrol, hydraulic fluid and transformer liquid. Whether capturing leaks or spills directly, or filtering contaminated water, our smart polymer reacts with hydrocarbons to form solid rubber. In this state, the pollutants can't leak out – even under pressure. CG1 polymer is non-toxic, non-carcinogenic and has no special COSHH requirements.

The absorbents used in the majority of spill control products on the market act like sponges. When it rains, and these products get saturated, contaminated water flushes back out of them into the environment. Similarly, contaminated water that has pooled inside them can be spilt during transit and disposal. CG1 smart polymer locks contaminants in permanently; only clean water runs out.

If it isn't Green Rhino, it isn't working.



#### Before and after

The white CG1 polymer in EnviroPad® reacts with hydrocarbons to form a layer of solid, insoluble rubber.

## Some of the companies using Green Rhino products:































The flaws in the plant nappy were overcome by the EnviroPad. 

Balfour Beatty: Sustainability Case Studies (2018)

ff Esh Construction needs to be demonstrating best practice relating to pollution prevention, which can be evidenced by using the Green Rhino EnviroPad.

Esh Construction: Green Rhino Case Study (2017)

Cleaner and less messy to dispose of, as the pads don't leak compared to other absorbent materials.

Morgan Sindall: Considerate Constructors Best Practice Hub (2016)

Before the introduction of Green Rhino it was accepted practice to pump water out of a street-works hole and discharge to a grass verge, if available, or down the street if not. If the water was heavily contaminated with oil and/or sediment, the company would have to arrange for a tanker to pump out the water and take it off site for disposal at a cost of approximately £1,000.

Basil Scarsella, Chief Executive Officer UK Power Networks Innovation Strategy (2014)



## **EnviroPad®**

## The spill pad that doesn't leak when it rains

- The original and best smart polymer spill pad
- Turns oil leaks and fuel spills into solid rubber with zero leakage
- Can be safely stored/carried upright & jet washed
- 5 sizes to minimise spend
- Best oil retention rates



#### **Considerate Constructors Scheme** BEST PRACTICE HUB











inside

#### Cost per litre of oil absorbed:

EnviroPad®	Nearest Competitor	Nearest Competitor + Liner
£13	£53	£28
£12	£42	£22
£12	-	-
£12	-	-
£8	£25	£15
	£13 £12 £12 £12	EnviroPad®         Competitor           £13         £53           £12         £42           £12         -           £12         -

Based on average prices from six leading stockists (March 2020).

#### Best spill control. Best value.

- EnviroPad® has the lowest cost per litre of oil absorbed. And it doesn't leak!
- Can be used inside and outdoors
- Doesn't need sidewalls or a liner
- Reduces the volume of waste you produce because contaminated water doesn't pool inside

CODE	PRODUCT	SIZE	CAPACITY
GRR 52 02 01 EPAD	EnviroPad S4	610 x 460mm	Up to 4.5L oil
GRR 52 02 10 EPAD	EnviroPad M10	900 x 690mm	Up to 10.5L oil
GRR 52 02 20 EPAD	EnviroPad L20	1370 x 910mm	Up to 20.2L oil
GRR 52 02 22 EPAD	EnviroPad XL30	1370 x 1370mm	Up to 30.4L oil
GRR 52 01 05 EPAD	EnviroPad XXL40	2180 x 1370mm	Up to 44.3L oil

## A better fit for your plant and machinery ...and your budget!











**EnviroPad®** S4 Small Up to 4.5L

**EnviroPad®** M10 Medium Up to 10.5L

**EnviroPad®** L20 Large Up to 20.2L

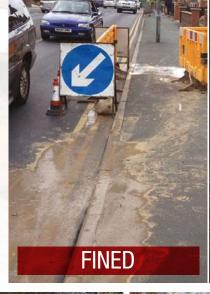
**EnviroPad® XL30** Up to 30.4L

**EnviroPad®** XXL40 Up to 44.3L

# Oil & Sediment **Dewatering Filters**

### Stay compliant and on schedule with our rugged and reusable filters

- Save £000s on third-party callouts and project delays
- Avoid fines and loss of reputation
- Oil and sediment removed to EA-accepted levels
- Ease of use and fast deployment encourage compliant operations
- Rugged and reusable up to 20 times
- Increase flow rate and capacity using Green Rhino Manifold System











#### Sediment Filter

#### Stay compliant and on schedule with this rugged and reusable filter

- Filter holds 20kg of sediment
- Reuse up to 20 times (400kg)
- Water discharged to EA-accepted levels

#### Sediment XL Filter

#### Our largest dewatering filter for larger volumes of water and sediment

- Filter holds 40kg of sediment
- Reuse up to 20 times (800kg)
- Water discharged to EA-accepted levels

#### **Economy Sediment Filter**

#### Low-cost but effective filter for low-volume and low-risk applications

- Filter holds 20kg of sediment
- Replace after 20kg
- Water discharged to EA-accepted levels





#### Ultra-fine Sediment & Oil Filter

#### Finer filtration for sensitive environments

- Filters 20kg sediment to 1μm
- Cheaper than settlement tank
- Reuse up to 20 times (400kg)
- Camlock option for use with high pressure pumps.

All filters (except Economy) feature a hydrocarbon detector. For sediment filters, this tells you to stop pumping. Use Green Rhino Oil Retention Pillows to remove pollutants.



#### Oil & Sediment Filter

#### Removes oil sheen as well as sediment

- Retains 2.5L of oil sheen
- Filters 20kg of sediment
- Reuse up to 20 times (400kg) or until integral hydrocarbon detector turns dark blue
- Water discharged to EA-accepted levels

CODE	PRODUCT	SIZE	CAPACITY	FILTER	REUSE	FLOW RATE
GRR 01 05 02 SED0	Sediment Filter	150 x 35cm	Up to 20kg	150µm	Up to 20x	450L/min
GRR 01 05 10 SED0	Sediment XL Filter	150 x 80cm	Up to 40kg	150µm	Up to 20x	800L/min
GRR 01 06 01 BFIL	Economy Sediment Filter	150 x 35cm	Up to 20kg	100µm		450L/min
GRR 01 00 01 0ILS	Oil & Sediment Filter	150 x 35cm	Up to 2.5L / 20kg	150µm	Up to 20x*	300L/min
GRR 01 07 01 EVAC	Ultra-fine Sediment & Oil Filter (Cam)	130 x 30cm	Up to 2.5L / 20kg	1µm	Up to 20x*	300L/min
GRR 01 07 50 EVAC	Ultra-fine Sediment & Oil Filter	180 x 30cm	Up to 2.5L / 20kg	1µm	Up to 20x*	300L/min

<sup>\*</sup> Oil & Sediment filters must be replaced when integral hydrocarbon detection strip turns dark blue.

#### Multi-filter Manifold

Process large volumes of contaminated and dirty water cost-effectively

- Use with 4, 6 or 8 filters
- Easy to install and use
- Compatible with all Green Rhino Dewatering Filters

companio maran c	aroon rilling bowatoring rilloro		4
CODE	PRODUCT	SIZE	FLOW RATE
GRR 99 01 04 MSYS	Manifold - 4 gang / 4" Bauer fitting	98 x 111cm	1200-3200L/min
GRR 99 01 06 MSYS	Manifold - 6 gang / 4" Bauer fitting	148 x 111cm	1800-4800L/min
GRR 99 01 08 MSYS	Manifold - 8 gang / 6" Bauer fitting	198 x 111cm	2400-6400L/min



## Oil Retention Pillows

#### Absorb and retain pollutants with zero leakage

- Fast, effective response to oil and fuel spills
- Use proactively in bunds, tanks, etc.
- Smart polymer attracts and solidifies hydrocarbons
- Zero leakage even when wrung out
- Reduce volume of waste to be disposed of
- Standard COSHH disposal
- Avoid the cost and delay of third-party callouts





CODE	PRODUCT	SIZE	CAPACITY
GRR 02 50 01 PILL	Oil Retention Pillow 1L	30 x 30cm	1L Oîl
GRR 02 50 04 PILL	Oil Retention Pillow 4L	60 x 60cm	4L Oil
GRR 02 50 08 PILL	Oil Retention Pillow 8L	100 x 72cm	8L Oil











## Oil Retention Booms

#### Smart polymer booms prevent the spread of spills on water or land

- Smart polymer absorbs and solidifies hydrocarbons creating an impermeable barrier
- Any unabsorbed pollutants are successfully contained
- Zero leakage even when saturated or wrung out
- Marine booms ideal for proactive protection of lakes, marinas, harbours and watercourses near construction sites
- Quick Deployment Booms perfect for spills on land or still water
- Reusable until completely solid
- Can be linked together to create any length of barrier

Available in a range of sizes from 1m to 30m Go to www.greenrhinoglobal.com to see the full range of sizes

#### **Considerate Constructors Scheme BEST PRACTICE HUB**

### The Costain-Carillion JV used Green Rhino Oil Retention Booms on the A5-M1 Link project

If the polymer booms are placed across the River Flit and Ouzel Brook watercourses downstream from CCJV plant operations. The booms sit on top of the watercourse and allow water to flow naturally but would capture any traces of diesel or oil in the event of a spill. The boom was deemed innovative by the Considerate Constructors Scheme. ""

www.ccsbestpractice.org.uk/entries/reducing-the-impact-of-spillages-near-watercourses

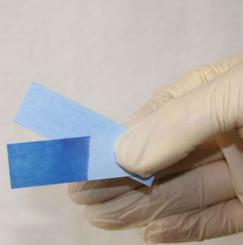
## Oil Detection Strips

#### Immediate detection of hydrocarbons in water

- Test standing water before dewatering or disposal
- Test water after spill response to check purity
- Avoid pollution incidents and fines
- Detect 1ppm oil
- 100 per pack

CODE	PRODUCT	SIZE	
GRR 99 99 01 HDST	Oil Detection Strips – Pack of 100	8 x 5cm	





# Save £000s on Water Remediation

Our smart polymer solutions provide robust, cost-effective alternatives to oil-discriminating pumps, interceptors and vacuum tankering

- For bunds, tanks and drainage outflows
- Remove hydrocarbons and sediment to non-detect levels
- Easy install and maintenance no mechanical parts, no power required
- Automatic shutdown on detection of a catastrophic breach or when polymer filter needs replacing
- Separate sediment filters can be easily flushed out when full
- Significantly reduced waste disposal costs



Volker Fitzpatrick submitted the Green Rhino Oil Removal Cartridge to the Considerate Constructors Best Practice Hub – citing 'a significant reduction in waste disposal costs.'

Western Power Distribution uses Green Rhino Water Remediation Chambers to prevent creosote pollution at its utility pole storage depots.



#### Oil Removal Cartridge

Attaches to a bund or tank outflow and removes all oil-based contaminants. Ideal for fuel storage bunds or refuelling stations.



#### Inline Filtration System

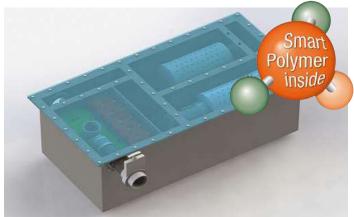
A self-contained unit housing a single Oil Removal Filter. Can be installed above or below ground, at the end of a run, and/or connected to a pump.

PRODUCT	FLOW RATE	CAPACITY
Oil Removal Cartridge Type 1	6L/min	1L Oil
Oil Removal Cartridge Type 2	15L/min	2.5L 0il
Oil Removal Filter	80L/min	14L 0il
Inline Filtration System	80L/min	14L 0il
Water Remediation Chamber - 1 Filter*	80L/min	14L Oil
Water Remediation Chamber – 2 Filter	160L/min	28L 0il
Water Remediation Chamber – 4 Filter *Not suitable for creosote.	160L/min	56L Oil



#### Oil Removal Filter

Higher capacity alternative to the cartridge for higher flow/risk applications.



#### Water Remediation Chamber

Heavy-duty hydrocarbon and sediment filtration system for highly sensitive or remote sites. Ideal for transformer bunding or utility pole and railway sleeper storage.

We have worked closely with leading utilities and their subcontractors to develop our water remediation solutions.

Please call us on 01206 299388 to discuss *your* pollution control challenges.

# Quick Response Dewatering Pack

Fast and effective processing of sediment, oil sheens and minor slicks

- Essential for construction sites and maintenance gangs
- Water discharged to EA-accepted levels
- Dewatering Filter will remove 2.5L oil and 20kg sediment
- Where contamination more serious, use pillows first each pillow absorbs and retains 1L oil
- Pillows contain our smart polymer which turns oil and fuel into solid rubber so it can't leak out
- Empty & reuse filter up to 20 times or until integral oil detector turns dark blue
- Standard COSHH disposal

CODE	PRODUCT	SIZE	CAPACITY
GRR 02 00 05 DWAT	Quick Response Dewatering Pack – 5 Pillows	46 x 34 x 34cm	7.5L oil, 20kg sediment
GRR 02 00 10 DWAT	Quick Response Dewatering Pack – 10 Pillows	46 x 34 x 34cm	12.5L oil, 20kg sediment
GRR 02 00 15 DWAT	Quick Response Dewatering Pack – 15 Pillows	46 x 34 x 34cm	17.5L oil, 20kg sediment





## Manual Bailer

# Quick & compliant dewatering of shallow excavations

- Low cost but highly effective solution
- No mess, no fines

Polymer

inside

- Essential item for all maintenance vans
- Captures sediment as small as 50µm
- Amey 'DEN' Gold Award-winning product

CODE	PRODUCT	SIZE	FLOW RATE	CAPACITY
GRR 02 02 01 EBKT	Manual Bailer (includes UN-certified 25L Pail, Sediment Net & Hose)	46 x 34 x 34cm	30L/min	15kg sediment
GRR 02 02 61 REFI	Sediment Net Refill Pack (5)	60 x 47.5cm	30L/min	15kg sediment each

## EnviroHorn Drain Filter

# Prevents sediment and contaminants from your site entering the drainage system

- Avoid fines
- Eliminate costly and time-consuming drain unblocking
- Water discharged to EA-accepted levels
- Cost-effective, reusable solution
- Instructions printed on the top
- Ideal for house building sites, wheel wash areas, entrances and exits to construction sites, motorway projects











**Install in five minutes:** Fit EnviroHorn to drain; refit drain cover; cut to size; tape down edges.

**FLOW RATE** 

130L/min

140L/min

## Green Rhino products are available from these stockists:







































Best spill control. Best value. Less waste. If your supplier isn't recommending Green Rhino, ask them why not?



About Us

Green Rhino has pioneered the use of smart polymer technology for spill response and containment. Our products are designed to reduce your environmental impact in two significant ways; effective spill control and reduced waste generation. In doing so, we also improve your operational efficiency and reduce your costs.

Consequently, Green Rhino is fast becoming the de facto choice for the UK's largest constructors, utilities, and their subcontractors.

There is still much to do with regards to pollution control. Whether creating solutions for unresolved problems or helping to increase compliant behaviour at all levels of the sectors in which we work, Green Rhino aims to be the leader.

Head over to our website for product videos and case studies:

## www.greenrhinoglobal.com

For the latest product developments, follow us on social media:







Manufactured in the UK



Printed on recycled paper