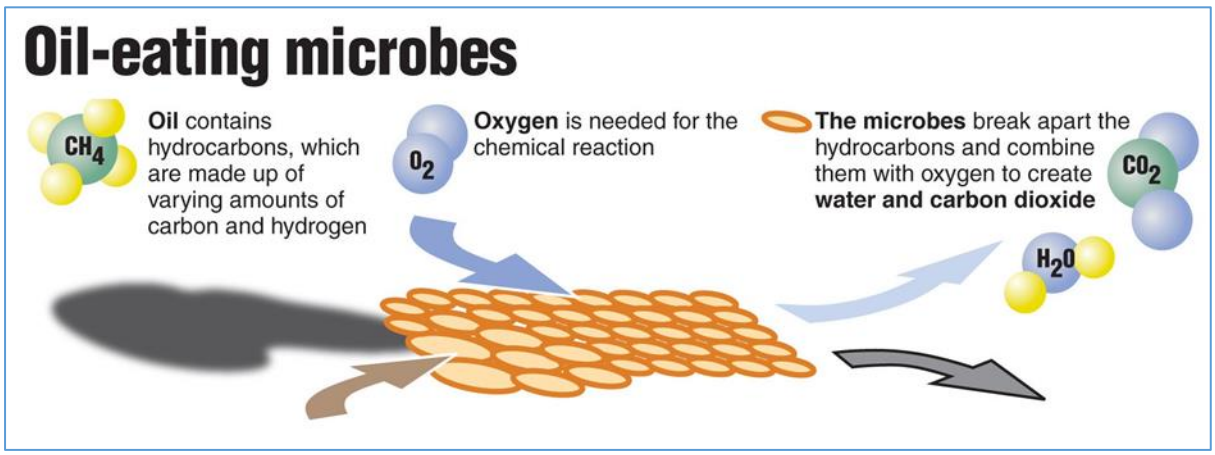
Roadbridge have begun trialling the use of Polysorb BioMagic on the Tievenameenta Wind Farm in County Tyrone, as an alternative to the traditional approach of cleaning up small oil or diesel spillages with adsorbent material and then excavating the contaminated material and sending it off-site as hazardous waste.

What is the best way to clean up oil spills after they occur? Nature has this down to a science. Wherever there is a natural oil seepage on the earth, nature has placed oil degrading microorganisms (microbes) into that environment. Nature is able to clean up after itself, but it takes time. It's a slow, natural healing process — nature's own pollution control. The problem is that mankind now puts far more hydrocarbon pollution into the environment than nature can quickly remove. By adding microbes to a contaminated environment, we can speed up the rate of natural degradation and help the bio-remediation process occur in hours and days and rather than months or years. Bioremediation refers to any method that uses microbes to recycle organic materials.

How do they work?

Microbes digest hydrocarbon molecules and break them down into harmless by-products of carbon, carbon dioxide and lipids (a natural, soluble fatty material that is food for fish and plants). The more complex the hydrocarbon, the longer this process may take (for example, diesel will be consumed more quickly than motor oil). This naturally occurring process is supercharged by adding these specific microbes to any oil spill or contaminated area.

Polysorb BioMagic is a non-hazardous biodegradable oxidant that stimulates natural bacteria and fungi thereby accelerating the bio-remediation of all forms of land and water contamination. It rapidly changes anaerobic conditions to aerobic, destroying odours and preventing dangerous methane and hydrogen sulphide build up from waste treatments. It is an oxygen-rich liquid that is manufactured from Oxygen & Nitrogen bearing salts dissolved in pure water. There are no poisons or harmful chemicals in it, so it is safe to humans, animals, plants and the environment.



Main Advantages?

The main advantage of this approach is that this is much less expensive than excavation followed by burial elsewhere or incineration and reduces or eliminates the need for pumping and treatment which is a common practice at sites where hydrocarbons have contaminated groundwater.

- They are completely natural, so they are a "green" solution.

- Polysorb can eliminate the need for absorbent products & their disposal problems/costs.
- Polysorb can be used to clean up spills on water, soil, or hard surfaces and can even be used to remove old stains in asphalt or concrete.
- A very small volume is needed compared to the area being treated.

Other Uses:

This product can be used for other applications as well as for spill management. Other examples include:

- WWTP – Wastewater Treatment Plants
- Plumbing Maintenance – Sinks, grease traps, etc.
- Septic Tanks
- Odour Control
- Bio-remediation of soil, water, stormwater, etc.
- Agriculture/Aquaculture – eliminating ammonia
- Oily Water – oil/water separators, containment sumps, etc.

By-Product:

The final by-product of microbes such as Polysorb is Carbon Dioxide, Water, Trace Carbons, Lipids (white fatty acids) and bacterial cells. The lipids are actually a source of food for larger organisms and vegetative life.

In conclusion, this product is 100% environmentally safe, non-toxic and contains no pathogens.

Figure 1 Polysorb being applied to a small oil leak on Tievenameenta Wind Farm