



AquaRockBag[®]

Product Brochure

Salix AquaRockBags[®] provide sustainable, UV-resistant rock-filled nets offering flexible, eco-friendly alternatives to rock armour, concrete and gabions. Reducing erosion, enhancing habitats, and supporting natural vegetation with proven long-term durability.

www.salixrw.com



Salix



AquaRockBag®

Salix's expertise in soil bioengineering has developed our pre-filled rock solutions to provide significant erosion and scour protection. The solution utilises high performance nets for optimal performance, filled with small stone to provide multiple benefits between erosion control and habitat creation. Typical applications include riverbanks, shorelines and deep water scour.

AquaRockBags® are double netted, UV stabilised and are constructed with abrasion-resistant materials. They are suitable in both freshwater and marine environments. Independent research has shown that the AquaRockBag® virgin polymer nets are significantly more stable than nets made from recycled polymers, so last the longest and are more abrasion resistant reducing risk of microplastic release over alternative products.

The smaller graded rock within the AquaRockBag® reduces flow velocities by absorbing water energy into the high interstitial spaces between the rocks.

These high interstitial spaces also provide enhanced habitat for invertebrates, accrete fines, gravels and silts which allow vegetation to establish naturally over time.

AquaRockBags® can be used independently or as part of a bioengineering design with Salix's vegetated systems above water level, providing the most effective scour and erosion control solutions available on the market. Salix's solutions work with nature, to provide habitat biodiversity simultaneously with an engineered approach for asset protection.

AquaRockBags® complete the family of sustainable rock revetments that Salix manufacture, which also includes rock rolls and rock roll mattresses.



AQUAROCKBAG.

**AquaRockBags®
are a flexible and
sustainable solution**



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AquaRockBags® being used to protect a bridge



AquaRockBags® being used to stabilise a steep riverbank

- Rapid installation compared to filling wire mattresses on site with big savings on labour costs
- Can be installed in flowing water or below water level
- Units can be supplied pre-filled or easily filled onsite, both options require less labour than gabions to install
- Simple and quick to fill on site
- Can often replace large rock armour, concrete and rip rap, plus provide long-term protection for soft/green engineering solutions
- Can be used in fresh or salt water
- Flexible system that contours to the surface
- Virgin Polymer UV Stabilised nets are abrasion resistant and can offer up to 100 years design life
- Easy to move on site

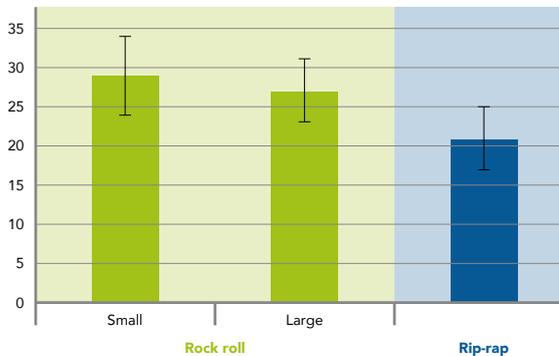
Benefits

AquaRockBags® are quick to install even in flowing or underwater conditions. Reducing labour costs and offering flexibility, durability and long-term protection in both fresh and saltwater environments.





**Resilient protection
whilst also providing
habitats for a diverse
range of marine
and freshwater
invertebrates**

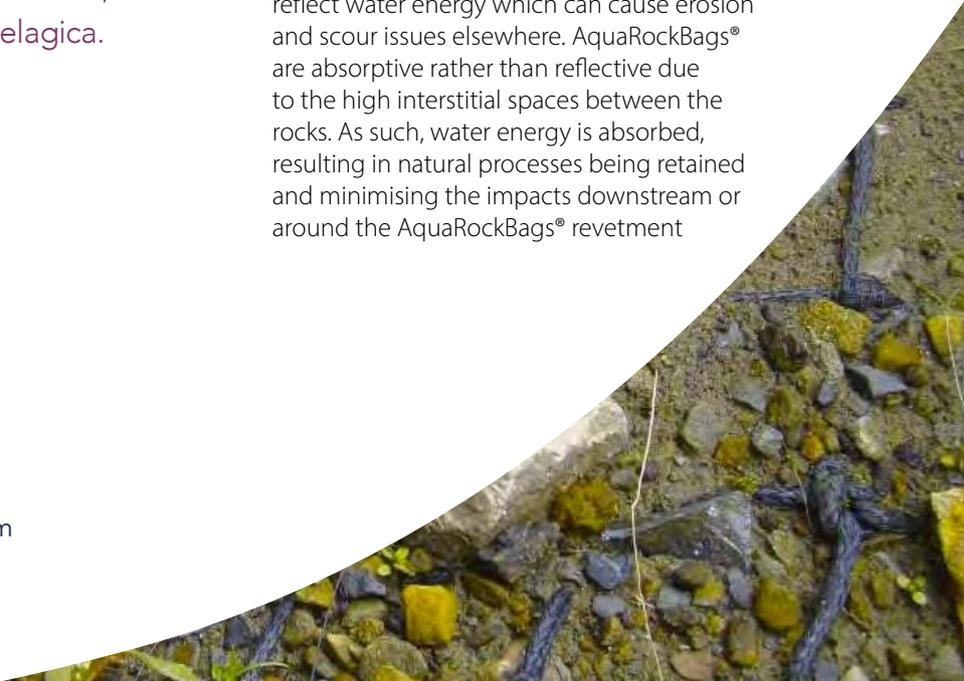


Swansea University

AquaRockBags® provide habitats for a diverse range of marine and freshwater invertebrates. Examples found in research from Swansea University include: *Phyllodoce maculate*, *Capitella capitata*, *Scoloplos armiger*, *Melita palmate*, *Carcinus meanus*, *Idotha pelagica*.

Ecological Benefits

- The stone sizing and grading within the AquaRockBags® has been developed to provide a balance between the structural interlock needed to provide a robust revetment and the optimum grading for ecosystem development and diverse biotic community habitat
- AquaRockBags® encourages fine accretion of sediment to enable vegetation establishment providing habitat for insects, molluscs and other invertebrates, which in turn supports fish and water bird populations
- Unvegetated Salix AquaRockBags® blend in easily with natural freshwater and marine sediments and provide substratum for numerous faunal and invertebrate species
- Many hard revetments (e.g. concrete blocks, blockstone, rip rap, gabions) deflect and reflect water energy which can cause erosion and scour issues elsewhere. AquaRockBags® are absorptive rather than reflective due to the high interstitial spaces between the rocks. As such, water energy is absorbed, resulting in natural processes being retained and minimising the impacts downstream or around the AquaRockBags® revetment





AQUAROCKBAG®

AquaRockBag® Applications

AquaRockBags® are used in both freshwater and saline conditions.

They are flexible, work far better with natural processes than other revetments, provide ecological benefits and can be vegetated over relatively short time scales.

AquaRockBags® work best underwater and can be combined with softer soil bioengineering solutions above water level.



Applications

- River bank revetments
- Scour protection around bridges and other structures
- Temporary works solutions
- Artificial reefs
- Shoreline protection
- Marine and coastal structures

**High performance
nets filled with
graded rocks**

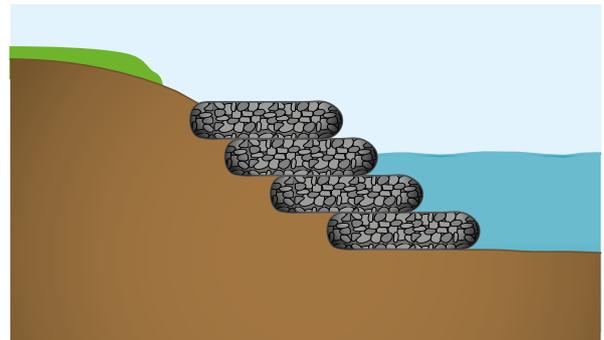
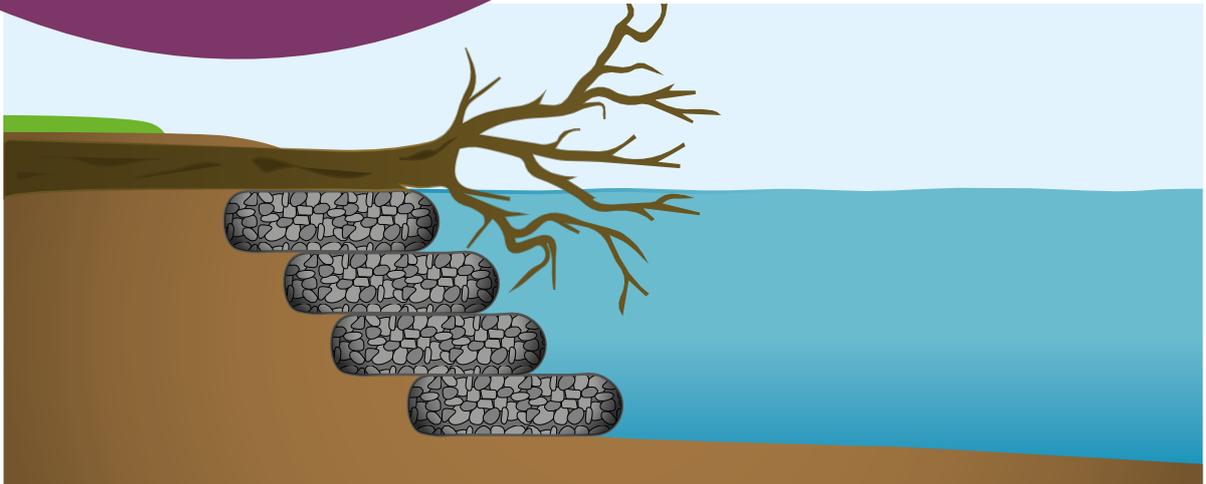


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Applications

Riverbank Revetments



They are flexible, work far better with natural processes than other revetments, providing ecological benefits and can be vegetated over relatively short time scales. AquaRockBags work best underwater and can be combined with other soil bioengineering solutions. Suitable for use on intertidal rivers.

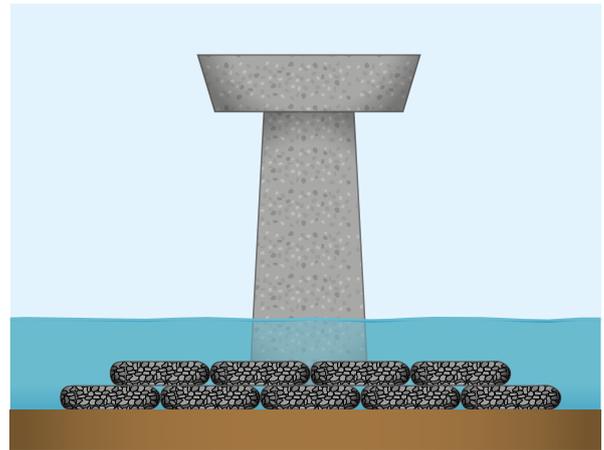
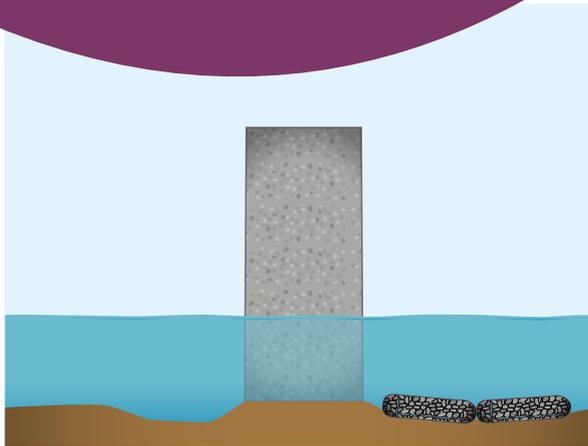
Combine with Soil Bioengineering Solutions





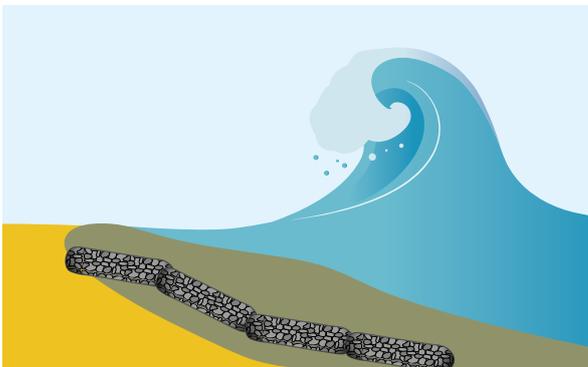
Applications

Asset Protection



AquaRockBags® can absorb energy in a system rather than reflecting it, making excellent scour protection.

Marine and Coastal Structures



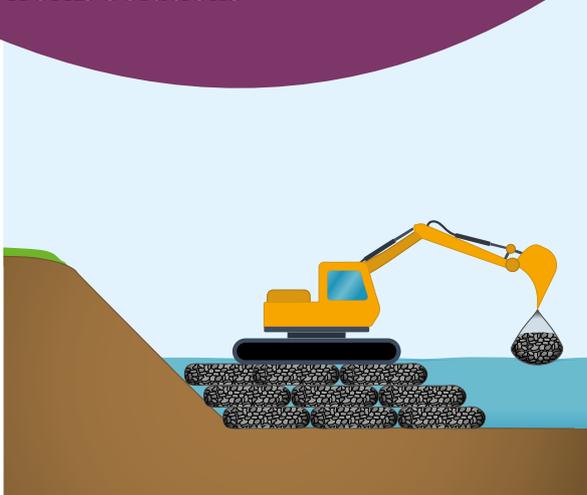
AquaRockBags® can be used in Saline water to prevent erosion and scour in marine and port infrastructure in coastal environments.

AquaRockBags® allow for improved biodiversity by providing habitat to invertebrates through the increased interstitial space allowing them to be used as artificial reefs.



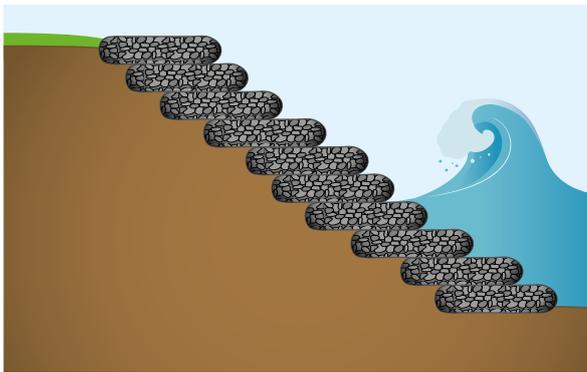
Applications

Emergency and Temporary Works Solutions



AquaRockBags® can be used for temporary works being able to removed fully once works are completed.

Shoreline Protection



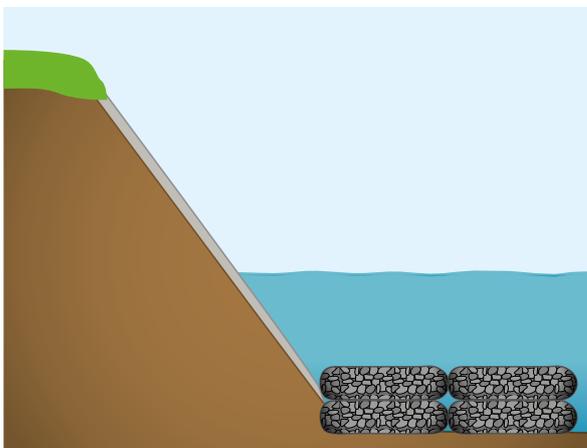
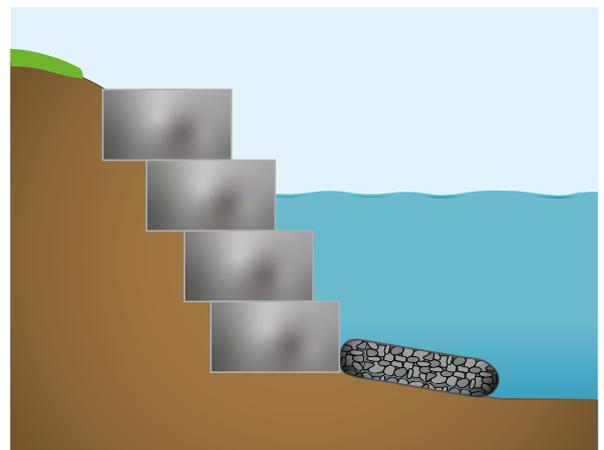
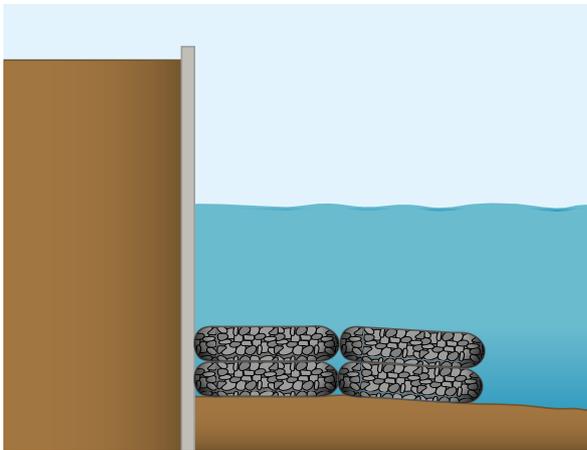
AquaRockBags® can be used as an alternative to rock armour to reduce the quantity of materials and to protect against wave action.



Applications

Protection of Bank Structures

AquaRockBags® being used to protect sheet piling and reduce the depth of the sheet piles



HDPE proven to be the most robust net material in fresh and saline water environments





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