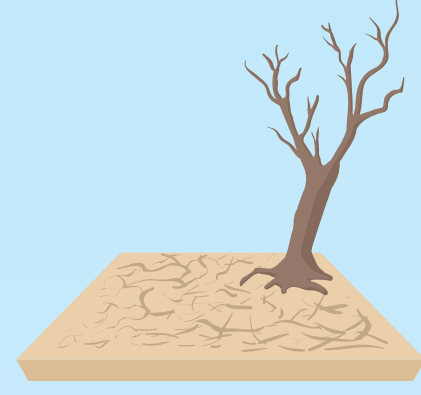


USING GABION BASKETS AND RENO MATTRESSES ON GREEN CONSTRUCTION PROJECTS

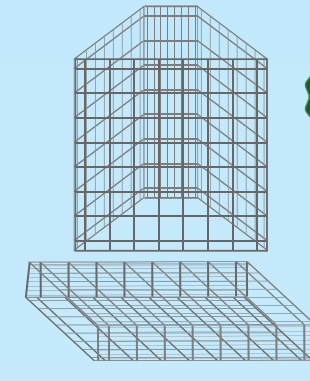
BREAKING GROUND ON CONSTRUCTION PROJECTS



Protecting the environment is perhaps more important than the project itself

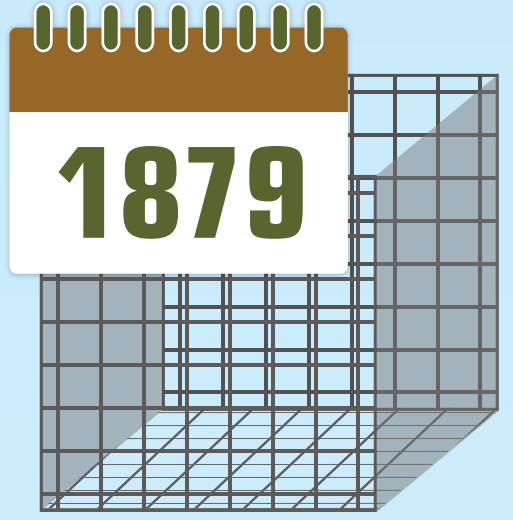


Unprotected soil can shift or erode, but erosion and sediment control measures help keep soil in its place

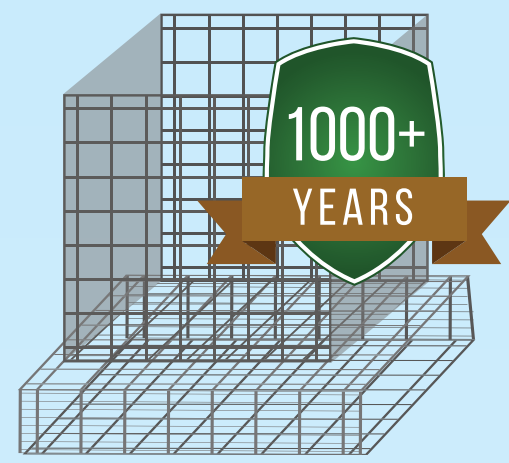


Gabion baskets and reno mattresses are effective, but more economical and ecological than manufactured walls

GABION BASKETS AND RENO MATTRESSES



The earliest “modern” double-twist woven gabion basket dates to 1879

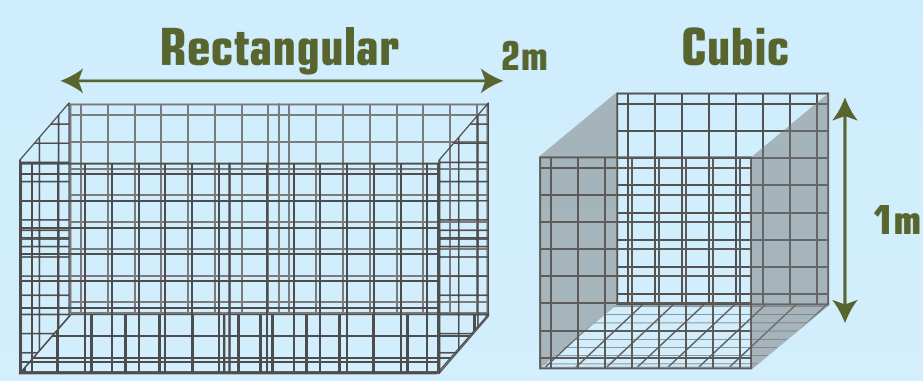


For thousands of years, gabion baskets and reno mattresses have been in use in one form or another

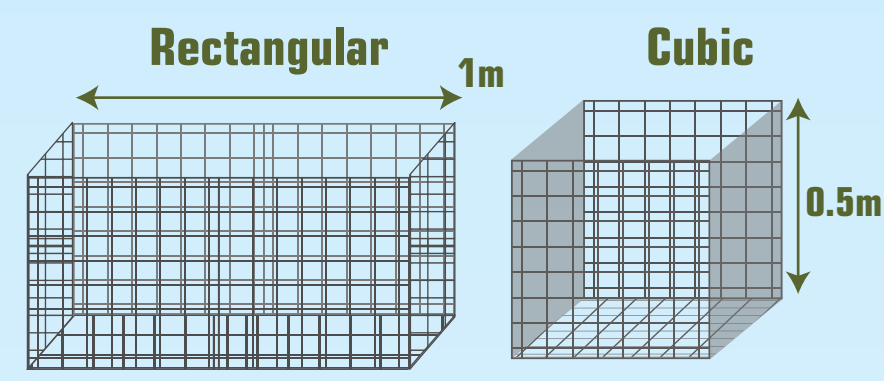


Today's gabion baskets can last upwards of sixty years.

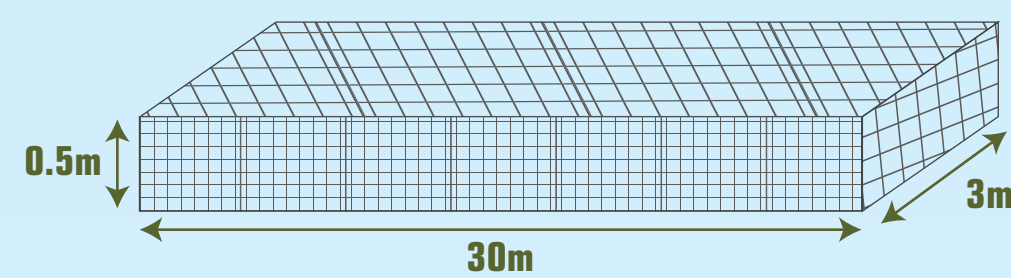
BASKET AND MATTRESS SHAPES



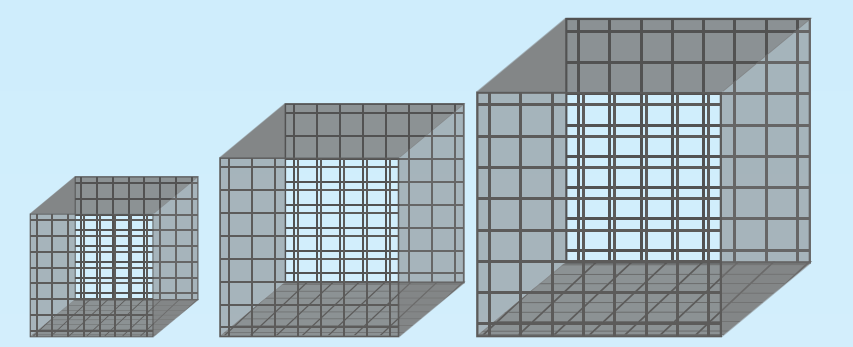
Gabion baskets are rectangular or cuboid, 1 m x 1 m in 2 m, 3 m, or 4 m lengths



Mini gabions are rectangular or cuboid, 0.5 m x 0.5 m in 2 m, 3 m, or 4 m lengths

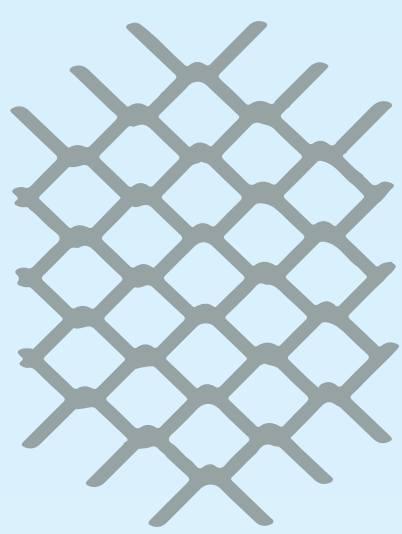


Reno mattresses are flat, .3m or .5m deep, 2m or 3m wide by 30m long.



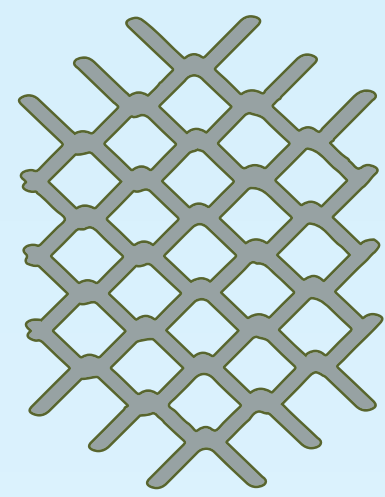
Decorative welded wire gabions come in a variety of sizes

BASKET AND MATTRESS MATERIALS



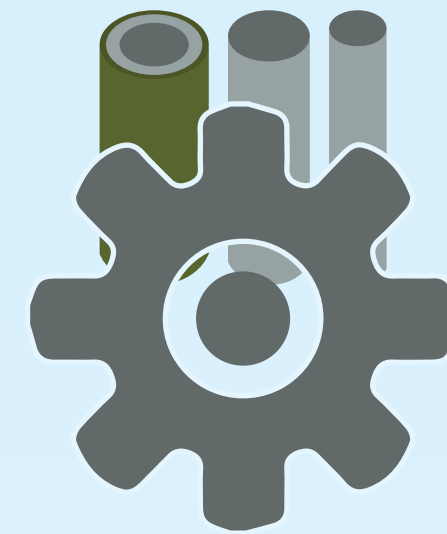
3mm-4mm

General-purpose gabions are constructed of 3 mm or 4 mm galvanized steel wire



3.7mm PVC Coated

3.7 mm PVC-coated galvanized steel wire is recommended for exposure to salt water. PVC protects from UV degradation, as well

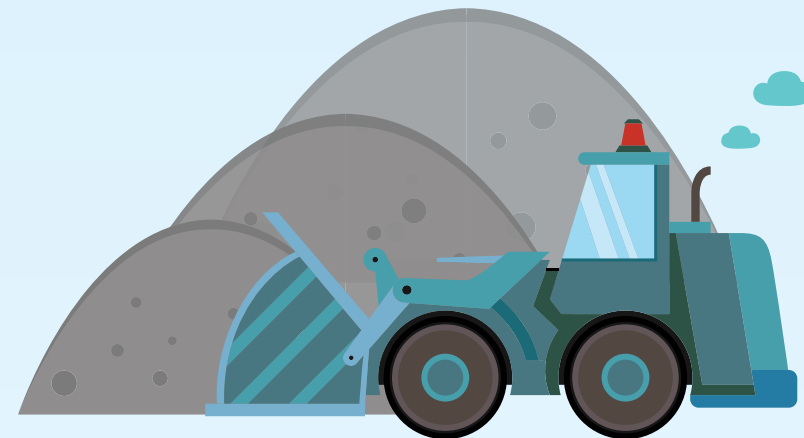


Lacing options include wire, hog rings, and coils

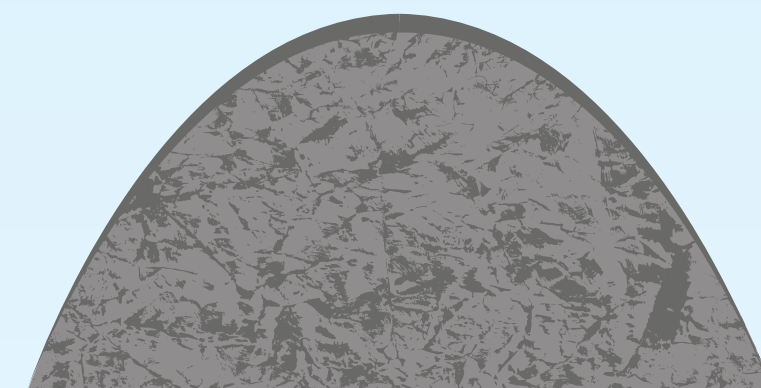
DEPENDING ON THE APPLICATION, GABION BASKETS CAN BE FILLED WITH A VARIETY OF MATERIALS



Local stone, sorted and washed



Purchased aggregates



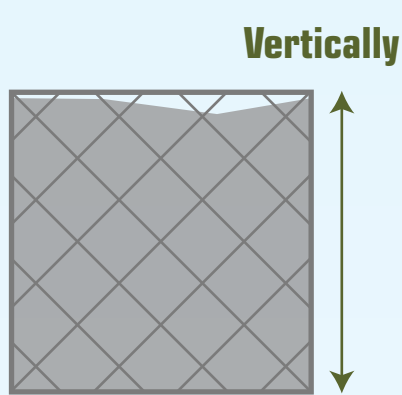
Construction and demolition materials



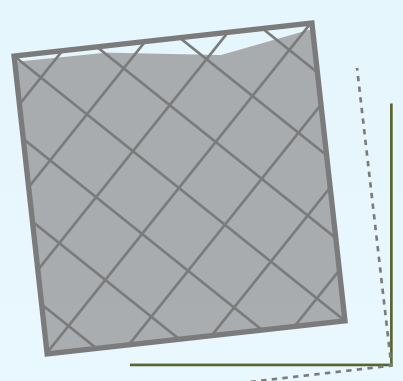
Slate, tile, glass, wood, etc.

USE IN SOIL RETENTION PROJECTS

RETENTION WALLS

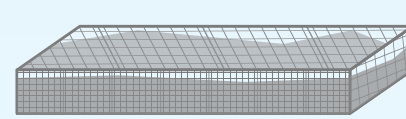


Gabion baskets usually stacked or stepped vertically

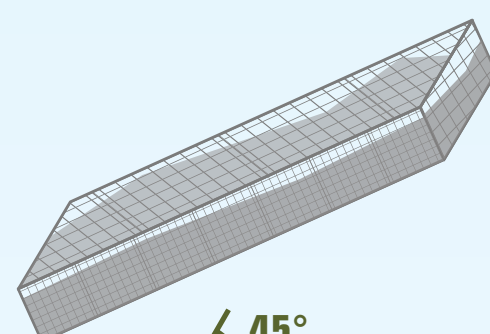


Can lean 3 to 5° into the slope

STREAM BEDS, STREAM BANKS, RUNOFF CHANNELS



Reno mattresses lay flat on the grade

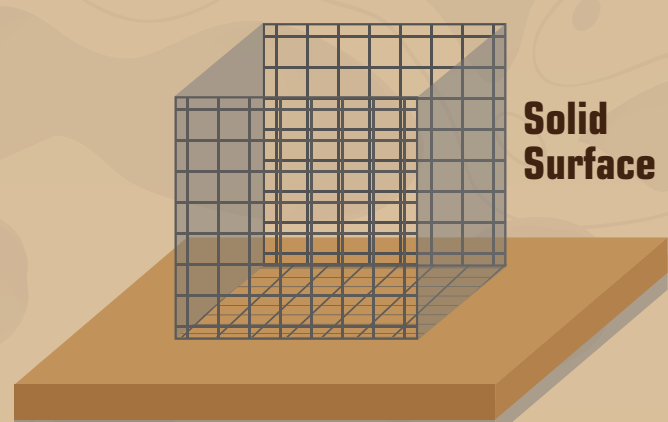


Can lay on up to 45° grade

PROJECT ENGINEERS SHOULD CONSULT WITH GEOSYNTHETIC SYSTEMS TO DEVISE SUITABLE SOIL RETENTION SOLUTIONS.



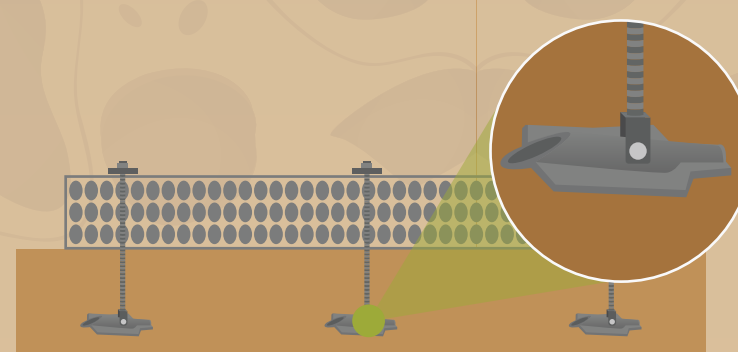
GENERAL INSTALLATION NOTES



Gabion Baskets need a level graded solid surface



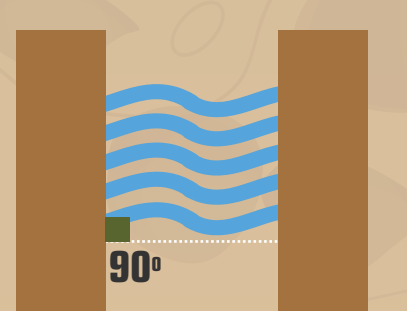
Reno mattresses need a graded solid surface



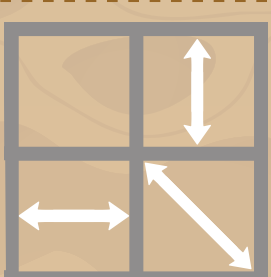
Use anchors to keep baskets or mattresses from shifting



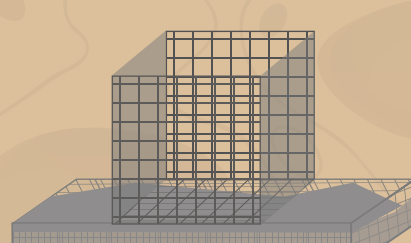
An appropriate filter (non-woven geotextile) layer should also be used



Internal baffles should be perpendicular to the slope and water flow



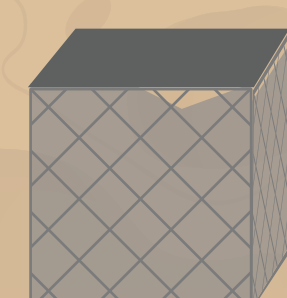
Lacing options should be evenly spaced



Baskets and mattresses should be laced to each other at edges and baffles



Tie wires should be used to prevent face bulging



After filling, lace the top closed