



BIOCOIR

INSTALLATION GUIDELINES EROSION PROTECTION APPLICATIONS

ISO: G 036 004 | DATE: JULY 2020 | VERSION 2



0800 247 839 | WWW.CIRTEX.CO.NZ



INTRODUCTION

This installation guideline is for temporary erosion protection applications. It includes storage and handling, and installation of BioCoir material. This guide is generic in nature and would be superseded by any project specific installation guidance.

APPLICATIONS

This installation guide is applicable for BioCoir installation applications including:

- Steepened slopes
- Road, rail and sound barrier embankments
- Low flow stormwater channels
- Highly erodible soils
- Heavy rainfall areas
- Parks, amenity areas, golf courses and sports grounds
- Quarries and landfills
- Facing for the DuraMesh® reinforced soil system





STORAGE AND HANDLING

When the BioCair rolls are delivered to site it is recommended to check the type and grade match the requirements of the project documents. All BioCair rolls should be marked clearly and in good condition before being accepted on site.

BioCair is transported and stored in rolls. These rolls can be stacked on top of each other but must not exceed seven rolls high. If stored on the ground, place a tarpaulin down first to help protect the rolls from dirt and wrap over the top of the rolls to keep them dry, and easy to handle. For stacked rolls extra care is required to ensure the stack is stable and the rolls cannot fall or roll.

BioCair rolls are supplied in easy to handle rolls and can typically be installed manually without any machinery.

If you have any questions regarding storage and handling of BioCair, please contact your Cirtex® representative.



TIP

It is important to note that BioCair is manufactured from natural coconut fibres which absorb moisture and are designed to break down over the design life of the project. If rolls are not kept dry while being stored onsite, it could cause the product to prematurely begin the biodegrading process before it has been applied to the site.



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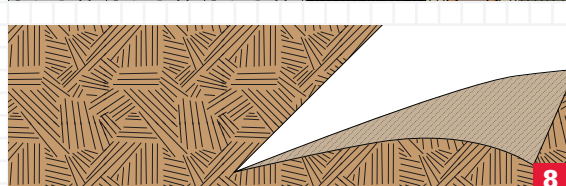
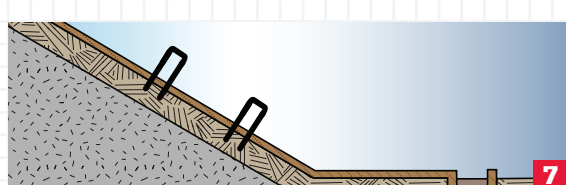
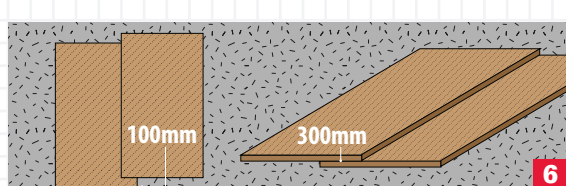
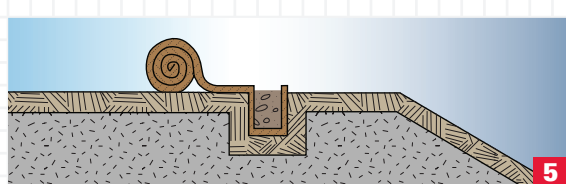
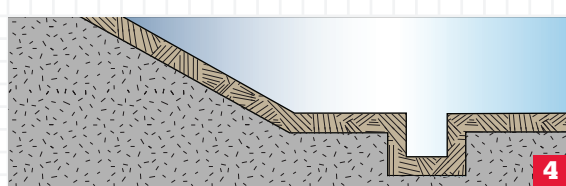
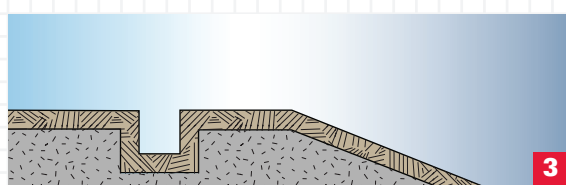
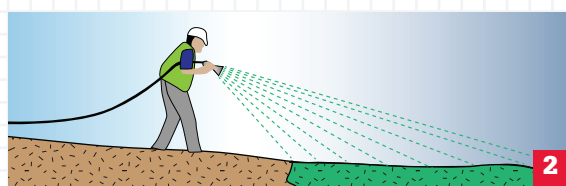
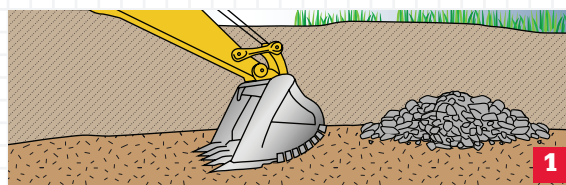
SLOPE INSTALLATION DETAIL

1. Prepare the ground by clearing away any rocks and debris and level as much as possible to ensure the BioCoir will have adequate ground contact.
2. If slope is to be planted in grass, apply hydroseed/grass seed now (before matting is applied). If to be planted with small grasses/shrubs etc, this will be carried out once matting is installed. In this situation, weed spray needs to be applied to kill weeds prior to matting being laid.
3. Create an anchor trench at top of slope a minimum of 600mm back from the crest with the minimum dimensions of 150mm deep, 150mm wide along the slope where the BioCoir will be applied.
4. Repeat the step above for the toe of the slope (600mm out from the toe of the slope).
5. Line the anchor trench at the crest of the slope with BioCoir and backfill and compact as you make your way along the slope.
6. Roll out the BioCoir down the slope and ensure you maintain a 100mm overlap between adjacent rolls and 300mm for joins part way down the slope. Repeat step 5 and line the anchor trench at the slope toe.
7. Pin the matting to the slope using the designed fixing pins and at a spacing that suits the application. Refer to diagrams for typical recommendations.
8. If BioCoir is being planted into, neat cuts should be made into the matting to allow plants to be inserted. As best practice we would recommend pinning the loose ends of the cut once the plant has been planted.

These guidelines are recommendations only.

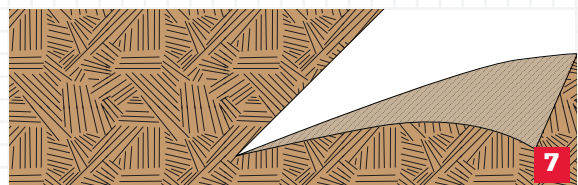
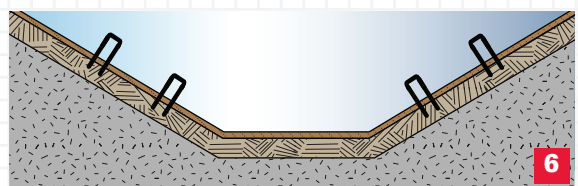
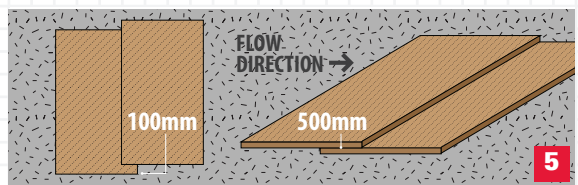
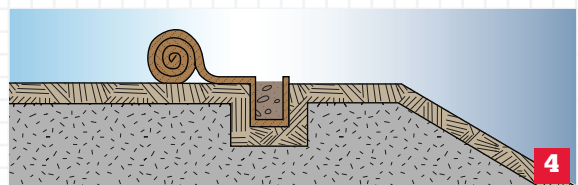
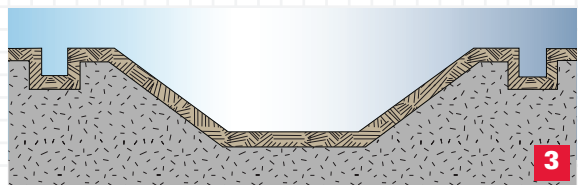
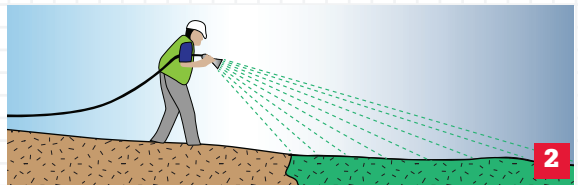
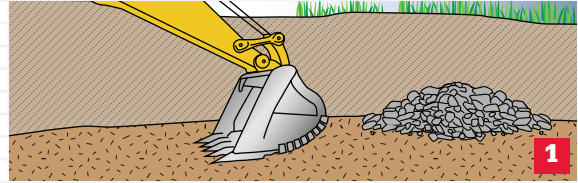
GENERAL

While there are many different applications that BioCoir is used in, for simplicity we have broken into the two most common categories: slopes and channels.



CHANNEL INSTALLATION DETAIL

1. Prepare the ground by clearing away any rocks and debris and level as much as possible to ensure the BioCoir will have adequate ground contact.
2. If channel is to be planted in grass, apply hydroseed/grass seed now (before matting is applied). If to be planted with small grasses/shrubs etc, this will be carried out once matting is installed.
3. Create an anchor trench at top of the batters on either side of channel a minimum of 600mm back from the crest with the minimum dimensions of 150mm deep, 150mm wide along the slope where the BioCoir will be applied.
4. Line the anchor trench at the top of the channel sides with BioCoir and backfill and compact as you make your way along the channel.
5. Roll out the BioCoir down the channel (in the flow direction) and ensure you maintain a 100mm overlap between adjacent rolls (side-by-side) and 500mm for longitudinal joins along the channel (end-on-end).
6. Pin the matting to the channel using the designed fixing pins and at a spacing that suits the application. Refer to diagrams at end of Installation guide for typical recommendations.
7. If BioCoir is being planted into, neat cuts should be made into the matting to allow plants to be inserted. As best practice we would recommend pinning the loose ends of the cut once the plant has been planted.



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WARNING

Installations on steep slopes will require the correct safety gear.



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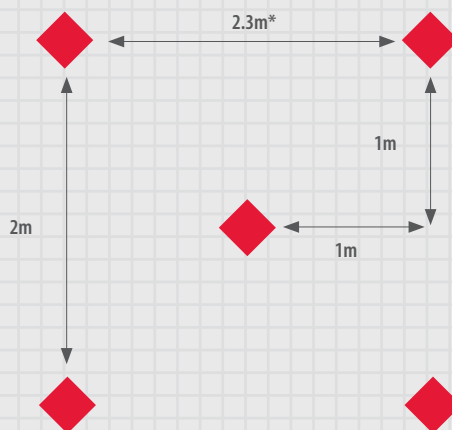
PINNING DIAGRAMS

Please note these diagrams are generic recommendations and the project engineer's instructions must take precedence.

FLAT SURFACES & SHALLOW SLOPES

≤ 4:1

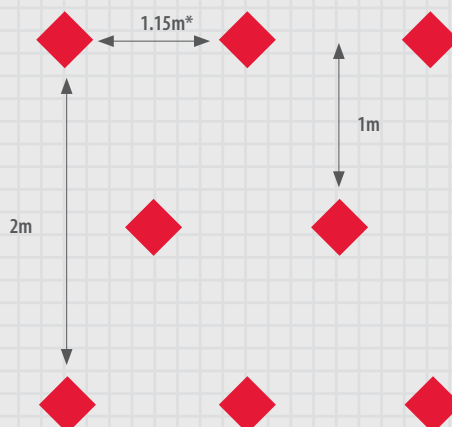
Approximately 0.5 pins per m²



MEDIUM SLOPES

≤ 3:1

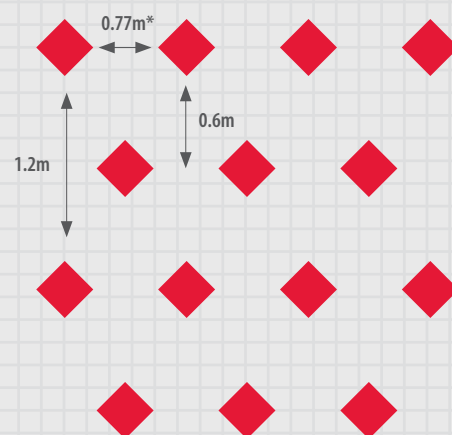
Approximately 1 pin per m²



STEEP SLOPES & CHANNELS

≤ 2:1 to 1:1

Approximately 2.2 pins per m²



NOTES

*Dimensions are based on a 2.4m roll width and allow for pins to be placed approximately 50mm from the roll edge.

PIN OPTIONS

Making sure the BioCoir is properly secured to the soil is an important detail and is essential to allow it to perform as designed.

Several pin options are available, and it is critical that the correct length and type is selected for your specific project (typically dictated by the soil type). As a rule of thumb, the softer the soil the longer the pin required.



MAINTENANCE

BioCoir is a biodegradable matting which does not require any long term maintenance. However, there are a few important points to be aware of during the 12-24 period while the matting breaks down:

REPAIR

If BioCoir is damaged following installation causing gaps to form (exposing the soil underneath), these should be covered with a patch of BioCoir cut to size to cover the affected area and extend 300mm beyond the edges.

WEED SUPPRESSION

BioCoir will help to suppress weeds while plants/grass become established however is designed as an 'erosion control' matting and will not act as a traditional synthetic weedmat. If vegetation (grass or plants) have not become established and covered the area within this period, weed control may be required by spraying or physically removing. Care should be taken not to tear the matting.

MOWING OF GRASS

If grass seed is applied to the soil and later to be mown before the BioCoir has completely broken down, the mower operator must take care to have sufficient clearance between the matting and the mower deck.



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