



# Installation and Maintenance Instructions: Synthetic Grass for Landscaping



A World Recycling Surfacing Group Company



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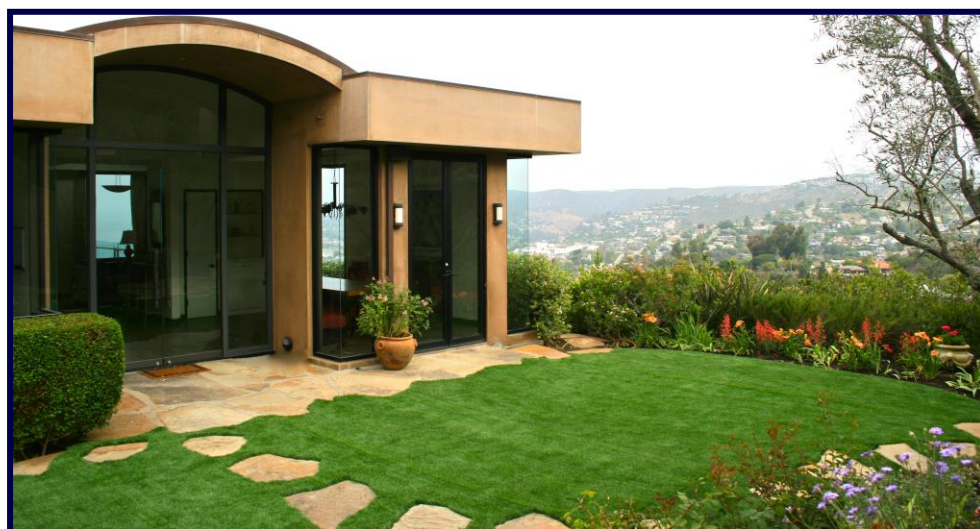
## Introduction

When installed correctly, PolyTurf® will provide many years of trouble free, useful, and attractive service. Just like laying a carpet, preparing the underlay is as important as laying the turf. Lumps and bumps, and particularly sharp objects under the turf can damage it and will be felt through the turf when you walk on it, so make sure the underlay is cleared of any debris before you lay down the turf.

Installation is not difficult, but it is important to perform each step in the process properly. Turf rolls are heavy, so make sure you have help and take care when moving them into position. Adhesives used for taping seams or for gluing down turf may affect some people who have allergies, so always wear gloves and eye protection, avoid breathing fumes or getting the glue on your skin.

Ideal conditions for performing the installation are warm sunny days with reasonably dry earth to make raking and smoothing easy. Weeds rarely penetrate the turf, but an optional weed blanket, which also contains anti-bacterial qualities, is recommended for all lawns. Occasionally, airborne seeds may take root if conditions are ideal, particularly in sand-filled installations, but they are easily pulled out because the roots will be unlikely to penetrate the turf base layer.

**\*If you have any difficulties or problems, please call 877-288-0045 for assistance\***





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## Description of Products

A variety of PolyTurf® products are available to suit your needs and budget.

All PolyTurf® products are:

- 100% Recyclable
- 100% Monofilament Polyethylene
- Composed of recycled content
- LEED Rated
- Lead free, Non-toxic, Anti-microbial
- Made in the USA

In addition, all PolyTurf® products do not require infill. Acrylic coated sand infill is recommended for some applications. For more information, please call the office or visit our website at [www.polyturf.com](http://www.polyturf.com).

### **LUXURY LAWN®, LUXURY LITE®, LUXURY LITE® NATURAL**

Presenting the exclusive Luxury Collection, our top-of-the-line, highly developed landscaping grasses. Thick, plush, and soft, Luxury grasses are multi-colored which adds dimension, characterizing the most natural looking lawn. Luxury Lawn Natural offers a tan thatch for an even more natural look in drier regions. Designed to be lush with a cushioned thatch zone, these products are desirable for sitting and walking upon and are used for many applications.

### **ROYAL DELUXE®, GARDEN GRASS®**

These economical turf options are a city's top choice for a green, low maintenance landscape. Eliminating most urban runoff concerns, Royal Deluxe & Garden Grass are recommended for streetscapes, green belts, medians, sloped yards, rooftops, pool surrounds, and in dog run areas for residential applications. The pile height, durable yarn fiber, and thatch zone make these grasses nearly effortless to clean and maintain, yet hold up well to high traffic scenarios.

### **IMPERIAL DELUXE®, NATIVE LAWN®**

As realistic as fresh cut fescue grass, these all-purpose leisure lawns are an affordable option for any type of application. Imperial Deluxe & Native Lawn are often approved by homeowners associations, seen in residential areas, parks, retail store displays, zoos, tradeshow booths, or theme park rides. The applications are seemingly endless! Available in a rich, dual-color green, both Imperial Deluxe and Native Lawn offer a down-to-earth tan thatch to achieve a more natural appearance.

### **CHAMPION SPORT®, ACTIVE PET AND PLAY®**

A superior choice for multi-purpose use, Champion Sport provides optimal yarn strength for recreation, playgrounds, sports or agility training for athletes, and is great for energetic pets as well. This short, durable grass adds reinforced resilience in high traffic areas. Active Pet and Play features an Enviroflow rapid draining backing option which makes this turf perfect for dog runs, dog parks, veterinary centers, dog day cares, and more. This product is cost-effective and provides an excellent play surface that is easy to clean.

### **GOLF GREEN, MULTIPURPOSE**

Golf Green offers superior stamina for a top of the line commercial or residential professional putting green. Available in two color choices, olive green or spring green, this nylon fiber yarn product includes a non-perforated rubber backing. Multi-purpose products are available in varying yarn types, fiber weights, and heights for virtually any application. Availability of various

multi-purpose products varies, please inquire with a representative for an option best suited for your application.

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## **Pre-Installation Planning**

**Choosing a Product:** The following considerations can guide you to making a choice

### **Surrounding Landscape**

- Take into account the blade colors that will blend in with native grasses/plants
- Tan thatch or all green thatch is available for a more realistic or healthy appearance

### **Pet Use**

- Products with rapid draining backing are most effective for allowing the flow of liquids through to the sub-base.
- Dogs that like to dig may require the stiff/ durable yarn fiber options
- Odor neutralizing infill and enzymatic cleaner are recommended in conjunction with turf

### **Traffic**

- High traffic areas: Shorter pile height with higher fiber weights and stronger “micron” blade fibers, or taller heights with higher fiber weights are recommended
- Low traffic areas: Any product is suitable, short or tall, lower fiber weights are more cost effective and may save money while still maintaining an esthetic value

### **Texture**

- Soft Blades: Good for small children or low use areas. Maintenance with rake/stiff broom will be required more often to keep softer blade fibers upward. Additional sand infill may be necessary for added durability.
- Stiff Blades: Provides better durability and sustainability of blade fibers standing up on their own, ideal for heavy use areas.

### **Drainage**

- Two backing types offered – Consider Enviroflow rapid draining backing for pet applications or areas that are sloped or require rapid drainage and perforated polyurethane backing for standard drainage needs.

### **Ordering/ Delivery of Turf**

- Determine square footage of area
- Design layout of turf and determine roll size
  - Standard roll size is always 15' wide, length is TBD
  - Allocate 6" on perimeter for “room for error” while cutting
  - Consider excess material that can be used in other areas
- Calculate weight for offloading and moving (can be heavy)
- Speculate if special equipment such as forklift or bobcat is required for maneuvering material or whether there be extra hands on site to assist

### **Develop Site Preparation/ Removal Plan**

- Existing Soil Conditions Evaluation: Determine type for proper preparation method
- Existing Irrigation: Will you cap off/shut down or remove?
- Inspect for signs of gofers or rodents to include barriers to prevent them from burrowing
- Contact Dig Alert: To determine if utility lines may be underground.
- Tree Roots: Will they need to be pruned, tree rings installed, or base be leveled?

- Inspect for window reflections: Have windows tinted if sun is reflecting on grass.
- Edging: Are edges exposed? What linear footage of containment is needed?
- Determine Linear footage of edging required (recycled plastic lumber board)
- Allow area to dry out for a few weeks and encourage grass to die for easier removal

## Tools and Equipment Required

The tools and equipment listed here are those required for a small installation (150-1,500 sf)



**Wheelbarrow:** For moving sand, water, sub-base, etc. around

**Shovel(s):** For loading and unloading sand, gravel, rubber, etc.

**Rake(s):** For spreading and leveling the substrate and the underlay

**Stiff Nylon Yard Brush(es):** For working in and spreading the optional sand in-fill

**Compactor:** A motorized, 14" vibratory plate compactor for compacting the substrate and sub-base for smooth, level results

**Heavy Hammer(s):** For driving galvanized nails to hold turf in place (optional)

**Power Brush:** For fluffing the pile prior to infilling (optional)

**Pair of Pliers:** For removing sprinkler heads

**Carpet Knives:** Slotted and loop pile for cutting turf (optional)

**Box Knife:** For cutting turf.

**Carpet Shears:** For trimming fine edges

**Carpet Kicker:** For tightening turf and removing wrinkles (optional)

**Leaf Blower:** For cleaning up surrounding area

**Shop Vac:** For clean up

**Tape Measure:** For measuring

**Seed Spreader:** For spreading sand infill and Zeolite (optional)

**Low Boy Dumpster:** For disposal of removed earth, sod, and excess materials

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## Materials Required

The materials required to install a PolyTurf® lawn are few and simple. Always use the recommended materials to ensure a satisfactory installation.

**Class 2 Aggregate Base ( $\frac{3}{4}$ " minus):** 4" of aggregate to provide a firm, yet porous underlay. This product compacts well, but allows permeability.

**Acrylic Coated Sand:** Used as an infill material to minimize flattening and weigh the turf down on the underlay. Not recommended for sloped areas.

**Zeolite:** (Optional) A naturally occurring mineral composite that reduces odor caused by pets. To be applied on top of sub-base and combined with sand as infill on pet applications.

**Seam Tape:** A 12" wide tape is used to join the seams or where a repair is necessary.

**Seam Glue:** The adhesive recommended for use with the seam tape. PolyTurf Green Glue 1 gallon tote will cover approx 50-60 linear feet at a 6" width.

**Screws:** Small, 1" tarpon screws used to hold down the outer edges of the turf around the perimeter when turf is screwed into place on a perimeter edging board. Screws can be removed easier than nails if the turf needs to be pulled tighter due to rippling.

**Nails:** (Optional) Used to pin down the turf on sloping areas. Optionally a 6" galvanized (60D) common nail is used throughout field of lawn, every 4', if needed.

**Weed Barrier:** Marifi 140 NC or Equivalent, with anti-bacterial properties, and a permeability of 140 gal/min/sf.

**Recycled Plastic Lumber (RPL) Edging Board:** 1x6's or 2x4's laid around the perimeter of the installation flush with the underlay to nail the outer edges of the turf to prevent creep (rippling) or curling in high use areas or when deemed necessary. Use plastic lumber (used for decking) when available or alternatively you may use redwood for rot resistance. Turf should be screwed into the edging board to allow for tightening of material if rippling occurs or when expansion/contraction occurs.

**Contoured Edging:** Bender Board edging is easy to bend and shape to create the desired a border. The edging can be used to protect your plant beds from encroaching grass.

**Sprinkler System Caps:** To cap the sprinkler system when the heads are removed and the system shut off.





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## Site Preparation

The preparation of the surface will vary depending upon use and drainage requirements. Typically, the following procedure is employed. Also See: Turf Installation Diagram (pg.9).

**Dig Alert:** Buried utilities can exist just about anywhere on your property. You can prevent damage to underground utilities by calling 811 two (2) business days prior to starting your excavation. This is a 100% free service, and more importantly- it's the law.

**Sprinkler System:** Turn the system off at the source and remove the sprinkler heads. Cap the pipes. Turn system back on and run to test system for leaks if caps are not tightly secured.

**Removal of existing surface:** The existing grass and approximately 3-5" (based upon height of turf chosen) of loose topsoil is to be removed and disposed into a lowboy dumpster, down to undisturbed earth. Where the topsoil is reasonably compacted it can be left. The sub-strate needs to be firm so that it doesn't move around under the turf, creating humps and valleys or collecting drainage water.

**Sub-strate:** The existing sub-strate of soil, clay, sand, etc., is to be raked and leveled to the required contours, and any protruding large rocks, roots or litter removed. Use a compactor to pack the surface firmly enough – ideally to 90% compaction - so that it will not move around under the turf.

**Perimeter Edging Board:** Lay 1x4's or 1x6's vertically (see diagram for positioning) around the perimeter of the area to screw the outer edges of the turf to. Preferably use recycled plastic lumber or a recycled composite redwood substitute (typically referred to as decking material) because it will not rot and screws will hold in well. Cut it into small sections to go around curved edges, filling in the gaps with the underlay material. Lay it so that the top surface is level with the adjacent areas or curbs by building the aggregate around the board which creates a flush sub-base.

**Containment:** Where the perimeter of the turf area meets trees, plants, flower beds, mulch, etc, and is curved, "Bender Board" can be used to define the area, and install recycled plastic lumber edging board laid close to it for a more secure and taught installation, whenever applicable.

**Sub-Base:** The first step is to lay a blanket of weed barrier onto the sub-strate (on top of the tamped soil and below the aggregate base if needed).

Depending upon the composition and condition of the sub-strate, 4" of underlay material is recommended.

For example, if the sub-strate is clay or extremely hard, packed soil, it will not drain on a level surface. A layer of Class 2 Aggregate Base will need to be laid down and compacted to provide drainage. The amount (depth) of aggregate and the material used may depend on the stability and drainage of local soil conditions.



Based upon a 4" thickness, to calculate the approximate volume in lbs of aggregate needed, multiply the square footage by 27 lbs, or consult with your local quarry for a more accurate estimate. Volume of aggregate required will vary upon the vendor.

If drainage is an issue- Around the perimeter, the substrate should be dug out to a depth of about 12" deep by 12" wide, and then backfilled with the aggregate to provide a drainage sump. Use aggregate to bring the level of the surface up to the level of edging boards, adjacent surfaces, and curbs as required.

The sub-base density for landscape applications should be roughly 90% of the Standard Proctor Density.

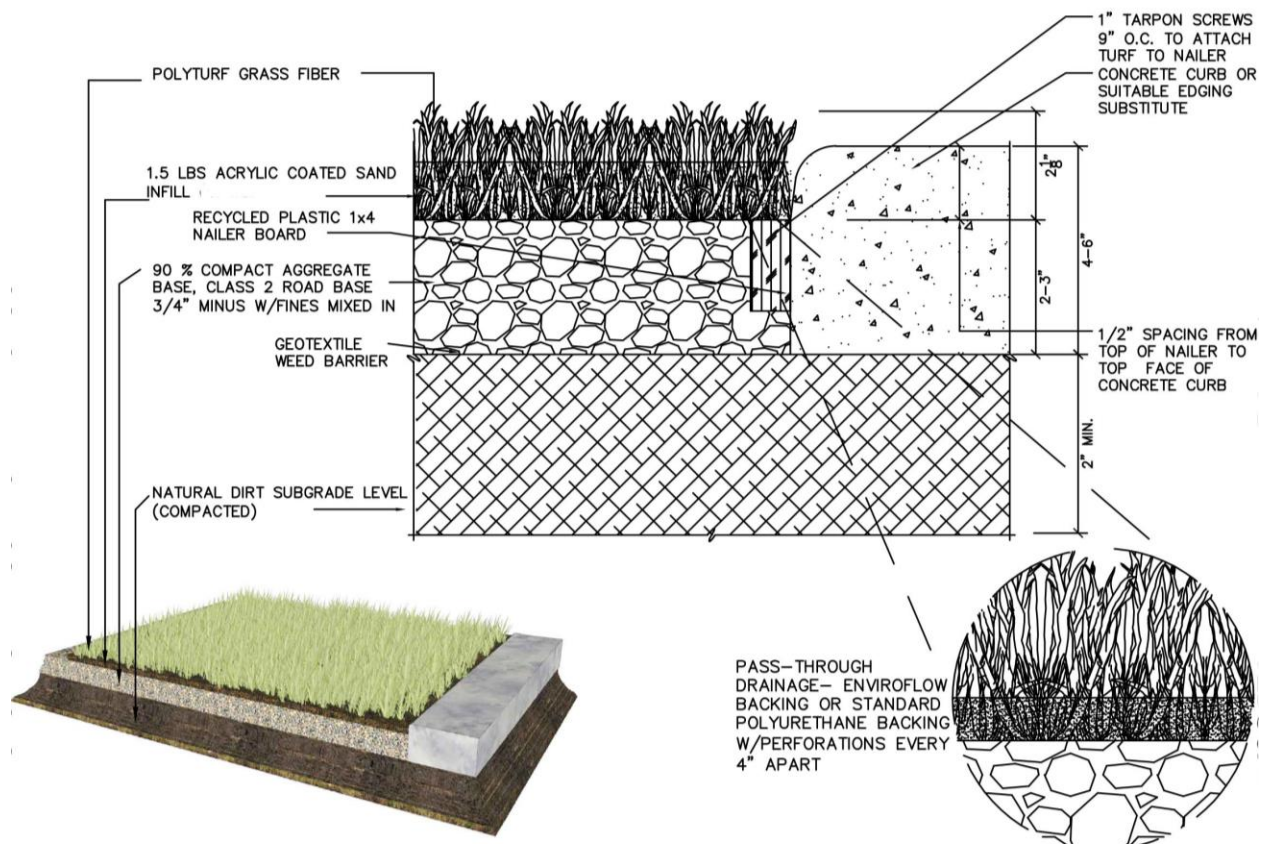
Moving slowly, inch by inch, tamp the base material with the compactor. After 3 to 4 passes over the sub-base, you should achieve the desired compaction.

The moisture content of the sub base material should contain approximately 12% water throughout, for the optimal result. Spritzing with water will assist in achieving proper dampness and compaction.

For pet applications, a layer of Zeolite odor neutralizing infill is recommended on top of the aggregate (or below the turf) at 1 ½ lbs/square foot.



## Turf Installation Diagram



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## Turf Installation

PolyTurf® synthetic turf is made of a directional material, therefore an acrylic coated sand infill is always recommended to help prevent the grass blades from lying flat. The acrylic coated sand infill is spread after the turf is installed. The infill also provides impact absorption and is a ballast to hold the turf in place. Infill is less desirable around pools, on sloping surfaces, or where the installation is for purely visual effect only and has moderate foot traffic. For pet applications, a special Zeolite odor neutralizing infill is recommended.

With the underlay prepared, the containment/edging board in place and the entire area compacted and tamped smooth and firm, work out your lawn layout.

Keep the layout as simple as possible, with as few seams as possible. Measure the width of the roll of turf. Check your roll and see if it comes with a border of fabric along one or both edges extending a couple of inches beyond the last row of turf. This border will have to be trimmed off with a carpet knife between the last row of turf tufts and the next one in. When you know the width of a roll decide which way you will run it out on your lawn area.

Roll out the turf in a sunny, spacious area to allow for expansion to occur and to let the blades open up. This extra step is a preventative measure to prevent rippling after installation. Now is a good time to check your sprinkler system again for leaks, just in case!

Turf is best viewed against the grain, that is, with the grass bending towards you. The turf lays down across the roll, along the line of the stitching, so, if you wanted the best view to be from your living room windows, you would lay the turf out by rolling from left to right or right to left across the front of your windows.

### Standard Installation

- 1) If you have room close by, roll the turf out to the length of your first strip. If you can, work off your new lawn surface to avoid disturbing your newly leveled and tamped surface.
- 2) Fold the material onto its back and using the carpet knife, cut in between stitches the length of your first strip. Take precaution in cutting between stitches, rather than across, as this can damage and loosen the blades on top, causing balding.
- 3) If the turf has a fabric border still attached, trim it off between the first and second row of stitching. Work from the back so you can see what you're doing.
- 4) Roll it up again and carry the roll onto the new lawn surface. Place the roll at the end of your first row and carefully roll it out without disturbing your underlay.
- 5) Move it into position, pull it tight, and trim around any shrubs, trees, utility boxes, paths etc with the carpet knife or shears. Don't trim it too close





at this point, you need to leave some material to trim off if necessary when the turf is nailed down and stretched.

- 6) Allow the turf to relax for an hour or more in the warm sun before carrying on. This allows time for the material to open and expand. In the meantime you can measure and cut your next strip of turf, trim the border, and fit it around any obstacles.
- 7) Starting in a corner, drill a 1" tarpon screw at the perimeter edge of the turf to the edging board every 9". Work across the end first, pulling the turf tight as you go. Leave about 18" at the end un-screwed.
- 8) With the end secure, pull the turf tight lengthways, using the carpet kicker to help pull it out, then screw it down along the edging board lengthways.
- 9) Screw across the other end, pulling it tight and again leave about 18" free at the end.
- 10) Place the second row of turf beside the first one, positioning it so the edges just touch with no overlap.
- 11) Pull one end tight across the roll and screw the center part to the edging board, leaving 18" at each end.
- 12) Pull the strip tight, again using the carpet kicker if necessary and nail the other end the same way, making sure the long edges are still just touching.
- 13) Repeat this procedure until your lawn is complete.
- 14) Return to the first strip and fold the long edge back about 18" (which is why you didn't screw down the end!) Then fold the second, adjacent strip back 18" also.
- 15) After cutting edges, lay a strip of carpet tape - typically about 12" wide - the length of the strips and centered between them. Hold or temporarily nail the ends down to the underlay so it doesn't move around as you apply the Green Glue adhesive. Keep in mind that expansion and contraction occurs at seams, so allow just enough material to prevent a gap or overlap (Allowing material to breathe prior to install allows it to expand).
- 16) Apply 6" width of adhesive to the 12" strip or as according to the instructions on the container.
- 17) With someone at each end, holding the strip tight, lay the first strip down onto the carpet tape. Press it down. Lay the second strip down the same way.
- 18) Screw the ends down, 9" apart. If no sand infill is used, insert 6" galvanized nails about 12" to 15" apart throughout the turf to hold it down. Be sure to place the nails between tufts so they are invisible and less easily contacted.





19) Repeat this process for the entire area.

20) Now take the power carpet brush or stiff yard brush and brush the entire area to raise the strands and fluff them up.

21) If using acrylic coated sand infill, add 1.5 lbs of infill per square foot. Sand infill should not exceed 3/8" depth and should remain 1/2" from the top of the blade. Start in one corner and distribute the infill with a shovel or seed spreader onto the turf. Place it to approximately the required depth as you go so you don't flatten the turf again as you walk on it. For pet applications, a blend of Zeolite odor neutralizing infill and sand infill (50% sand-50% Zeolite) is recommended.



22) Have one person spread and distribute the sand while a second person uses the stiff yard brush to work it down into the turf. The brushing action will keep the tufts upright as the infill settles to the bottom. Keep adding material until you are satisfied with the amount in place, then move on. When the entire area is filled and brushed in, you're done!

**NOTE: Save any leftover pieces in case you need to repair a damaged area in the future**

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## Maintenance

PolyTurf® lawns require very little maintenance. Occasional rinsing with a garden hose will freshen it up and remove any dust. It is not recommended to pressure wash the turf, as this will displace the sand infill.

Use a blower or light lawn rake to remove leaves and pull any small weeds that may have grown from air borne seeds landing in the sand infill. Around the perimeter, weeds may pop up from time to time, and can safely be eliminated by using a weed killer such as Round Up, which will not harm your artificial grass.

Sand and/or Zeolite odor neutralizing infill can be topped off as needed, maintaining a 1/2" from the top of the blade fibers.

As a general anti-bacterial cleaner and odor neutralizer, we recommend PolyTurf Refresh which can be used to clean play and pet areas. Try to remove pet waste as soon as possible.

If the lawn becomes stained, use Simple Green or a similar product, and CLR for water oxidation from nearby sprinkler systems. Just apply them to the problem areas, wait a few minutes and rinse them off.

### SAFETY PRECAUTION

Whenever nails are used to hold down turf, they should be routinely checked to make sure they are not working out as a result of traffic, earth movement or other causes. Protruding nails can be a potential hazard to people and animals, so drive them back in if they stick their heads up! Always use galvanized nails as they do not rust.

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## Repairs

It's always a good idea to keep the scraps left over from your original installation. They can be used to patch any areas that become damaged. While the turf is highly resistant to most normal contaminants and use, strong acids or other chemicals can discolor it, and sharp objects, vehicles, or vandals may damage it.

Small tears can be repaired by sewing the edges together if they are noticeable. Use a UV resistant and rot proof thread.

Larger areas may require the offending piece to be cut out and a new piece inserted.

Cut out the damaged piece, straight edges are easier, but curved, random sides will be less noticeable. If you do random shaped cutouts, place the cutout piece on a piece of newsprint or other paper and trace the outline on it. Then transfer the outline to a new piece of turf (on the back), making sure the turf is aligned the same way for directional grain turf.

Note: Make sure you transfer it the right way, you don't want a mirror image after you cut it out!

If the existing turf is just laid down on the underlay, use the seam tape in short sections to join the edges of the new piece to the existing one. Place adhesive on one side of the tape and slip it under the edge of the existing turf. Do this all around the edge.

Spread adhesive on the exposed tape and carefully place the new piece into position, pressing it down firmly onto the tape.

Fill the new turf to the same density as the surrounding turf with the infill material.

If the existing turf is glued to the substrate, then the tape is not necessary, just glue the new piece in place.