



# AUSTRALIAN-MADE WITH RECYCLED MATERIAL

## MEGAFLO® GREEN PANEL DRAINAGE SYSTEM

### INSTALLATION & FITTING GUIDE

Megaflo® Green is a wide and flat-shaped drainage panel system that provides the dimensional stability and field-proven structural strength for quick and effective sub-surface drainage. It is made from recycled HDPE material and is covered or wrapped with our Bidim® Green non-woven geotextile which helps to prevent soil migration into the drainage system.

#### BEFORE YOU BEGIN

##### Storage

Megaflo Green panel drainage system rolls should be stored in their original, unopened packaging. The designated storage area should be level, dry, well-drained and stable.

Damaged wrappers should be immediately repaired with weather resistant tape. Wrapping should only be removed from rolls prior to installation. All Megaflo products come wrapped in Bidim Green non-woven geotextile.

##### Equipment required on site

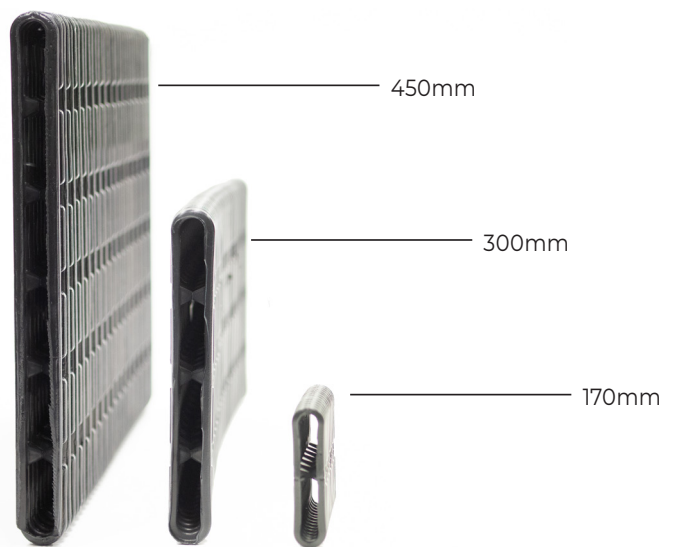
Equipment required:

- Megaflo Green dispensing frame (optional)
- Support stakes
- Construction tape
- A grinder, cutting power tool or hand saw
- Carpet knife, safety knife or scissors
- Mechanical trenching equipment savings in trench drainage
- Pins

##### Sizes

Megaflo Green comes in three standard sizes: 170 mm, 300 mm and 450 mm –all sizes available only in 40 mm thick.

Megaflo Green 900mm is available upon request and Megaflo Ultra is available for extremely high load applications such as tailings dams.



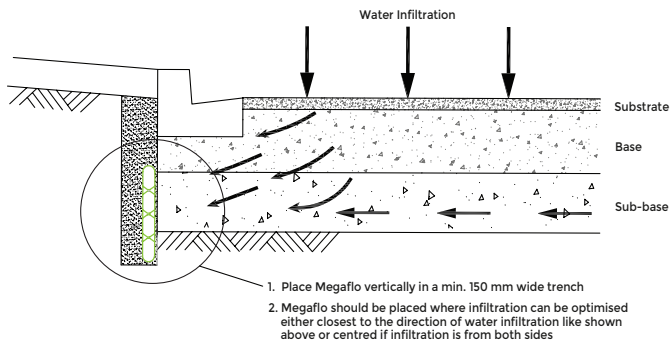
## ROAD EDGE DRAINAGE

### Trenching

Trenches should be constructed to line and level to achieve a minimum 100 mm cover for general load applications, with trench width of at least 100 mm.

Road installation of the Megaflor Green requires at least 150 mm cover. Road installations should be a minimum of 100 mm to 150 mm wide according to the road authorities specification or as specified in the construction drawings.

Bedding at trench invert is not required due to Megaflor Green's rigidity. Its stiffness provides bridging of any minor irregularities in the trench base profile. When installing in trenches through rock, care should be taken to eliminate sharp protrusions on side walls and the trench base.



### Geotextile

Geotextile lining for trenches is optional. If a lining is used, Bidim Green must line the sides, base and top of the trench, with an overlap similar to trench width. Fabric encapsulating the specified drainage backfill should be closed off and overlapped prior to backfilling to finished surface levels.

### Placement

Road edge drainage applications require Megaflor Green to be placed vertically against the side wall of the trench, closest to the direction of water infiltration, or as specified in construction drawings.

Where site conditions result in water draining from both sides, Megaflor Green should be located in the centre of the trench. Megaflor Green can be supported vertically in the trench by wooden stakes placed at approximately 10 metre centres.

### Backfill requirements

Backfilling operations need to be undertaken with care, during installation the surrounding backfill material will create load not only on the drainage core but the geotextile filter. The ribbed design of Megaflor Green assists the geotextile filter to resist damage during installation.

### Backfill specification

Megaflor Green can be installed with a range of standard filter gradings, including coarse washed sand, drainage aggregates and no fines concrete. Well graded, washed sand is the recommended backfill material. Backfill should be placed in maximum 150 mm lifts to 95% standard compaction. Washed sand backfill can be watered in for effective compaction. Compacted granular material around Megaflor Green should incorporate a cover layer to 150 mm above the drainage panel. Further material should be placed in lifts to complete filling to finished surface level.

Washed sand backfill materials should be placed with Megaflor Green in accordance with the following guidelines. No fines concrete and drainage aggregate backfill should be placed in accordance with the relevant specifications.

### Washed sand

AUSTRALIAN STANDARDS SIEVE SIZE MM	PARTICLE SIZE DISTRIBUTION % PASSING BY MASS
9.5	100
4.75	90-100
2.36	70-100
1.18	40-65
0.6	12-40
0.3	0-16
0.15	0-4
0.075	0-3

### Drainage aggregate

The selection of a single sized gravel drainage aggregate 6 – 8 mm can be considered where the soil to be drained is a coarse sand or uniformly graded gravel.

### No fines concrete

No fines concrete may be required where high structural loads, wheel loads or settlement of other backfill material may compromise pavement life or integrity.

A single-sized 10-20 mm stone, water to cement ratio of 0.5 and cement density of 250kg/m<sup>3</sup> is appropriate for installation with Megaflor Green.

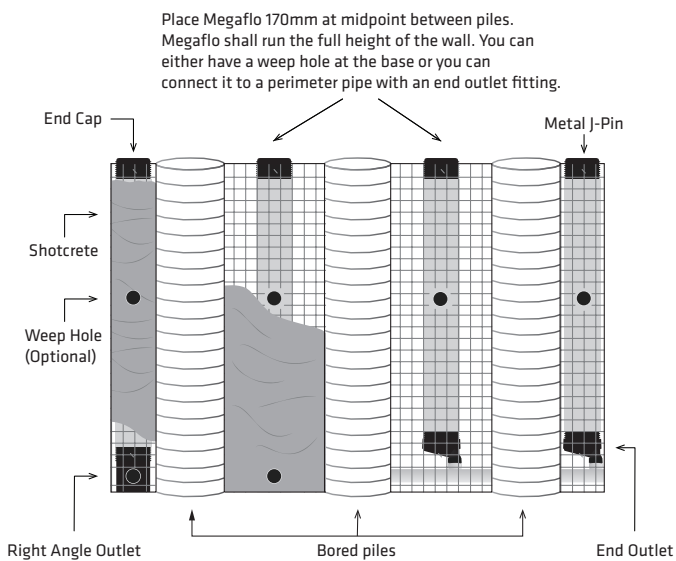
### Other drainage media

Standard filter specifications do not cover every situation and the compatibility of the filter material with the surrounding soil and Megaflor Green should be checked.

## SHOTCRETE & RETAINING WALL DRAINAGE

1. Cut Megaflo Green to length to match the height of the wall
2. Affix a Megaflo Green end cap to the top end of the pre-cut length
3. Place Megaflo Green lengths between bored piles
4. Hold Megaflo Green in place using J pins on each side or galvanised spikes through Megaflo centre support post or bar chairs or equivalent, to maximise the surface area of drain touching the face and in sufficient quantity to maintain the position of the Megaflo during shotcrete placement
5. Attach a standard Megaflo Green right outlet connector to the bottom of each length
6. Insert pre-cut length of 100 mm diameter smooth bore round pipe into the standard
7. Place and secure specified reinforcing mesh over entire surface
8. Spray shotcrete as specified
9. Cut 100 mm diameter round pipe flush with wall surface.

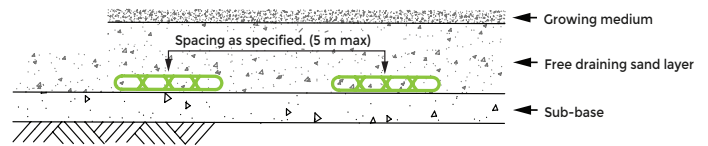
**Note: These are guidelines only. Site conditions, engineers instructions and job specific drawings need to be considered during installation**



## SPORTS FIELDS & TURF DRAINAGE

Removing surplus water from synthetic or natural turf sports fields and golf courses quickly is important so play can resume as soon as possible. Megaflo Green offers increased drainage performance when compared to conventional round pipe. The large surface area design of the Megaflo Green results in a water removal rate of almost twice that of a 100 mm round pipe. The increased drainage performance of Megaflo Green means that sports field surfaces are quickly returned to a playable condition even in wet weather.

A distinct benefit of the Megaflo Green is its ease of installation. Its trench-less installation method means that once a surface has been prepared and levelled, Megaflo Green can then be laid without disrupting the base level. With no trenches to dig, this means there is no need for gravel backfill and no disposal of trench spoils, resulting in a significant reduction in installation costs. The high crush resistance also means that during the installation process product will not be wasted due to machinery damage.



### Sports fields & golf courses

In sports field and golf course applications we recommend that the construction drawings are followed sure drainage layout meets the designer's specifications. For information regarding connections please refer to the fitting guide section of this document.

### Turf drainage

For typical turf drainage applications Megaflo Green is laid flat, typically in either a herringbone or fish bone pattern. Spacings between rows of Megaflo Green should not exceed 5 m.

Megaflo Green is available with or without the Bidim Green Non-Woven Geotextile. In some applications the designer may want the Bidim Green Non-Woven Geotextile cut during installation as seen above.





## MEGAFLO GREEN FITTING GUIDE

Megaflo Green fittings are made utilising recycled polymer. There is a full range of fittings available for Megaflo Green to allow you to:

- Connect Megaflo Green at junctions when laid flat in sports field and turf applications
- Fittings to connect Megaflo Green to round pipe in roads, basement walls, shotcrete and retaining wall applications
- End caps to finish lengths of Megaflo Green
- Pin the Megaflo Green to the surface so it maintains its layout in windy conditions

### 150MM U-PINS 4MM THICK



### MEG450 HDPE LAY FLAT FITTINGS

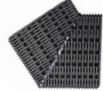
AVAILABLE IN MEG450 SIZE ONLY



MF45/30LFHX



MF45/30LF/45



MF45LF45



MF45LFT



MF45/30LFT



MF45LFR



MF45/45LFX



MF45/45LFT/45

### OUTLET FITTINGS

AVAILABLE IN MEG170, MEG300 AND MEG450 SIZES



JOINER  
COUPLING (CO)



SIDE  
OUTLET (SO)



RIGHT  
OUTLET (RO)



END  
CAP (EC)



END  
OUTLET (EO)

## T-Y multi fitting

Available in MEG170G size only

Megaflo Green TY Multi Fitting is designed to provide flexibility when connecting sections of Megaflo Green 170G together.

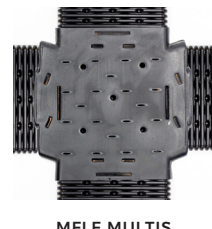
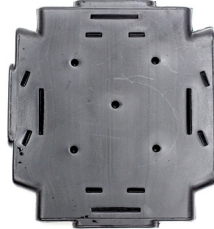
The TY Multi Fitting is supplied as a sealed unit which can be cut to suit any number of configurations. The cut off piece can be used as an end cap to reduce waste in the install process.



## Multi fitting

Available in MEG170G and MEG300G sizes

For use in turf and gold course application the Megaflo Green Multi Fitting is the solution for herringbone layouts as well as almost any other intersecting design.



MFLF MULTIS  
(WITH SLOTS)



MFLF MULTIS  
(WITHOUT SLOTS)

Visit [geofabrics.co](https://www.geofabrics.co) or call 1300 60 60 20 (AU)  
or [geofabrics.co.nz](https://www.geofabrics.co.nz) or call 0800 60 60 20 (NZ)

**GEOFABRICS**<sup>®</sup>  
Sustainable solutions