

Smarter Infrastructure

THE MEGAFLO GUIDE

INSTALLATION & FITTINGS



BEFORE YOU BEGIN

STORAGE

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

Damaged wrappers should immediately be repaired with weather resistant tape.

Wrapping should only be removed from rolls immediately prior to installation.

WHAT YOU'LL NEED ON SITE

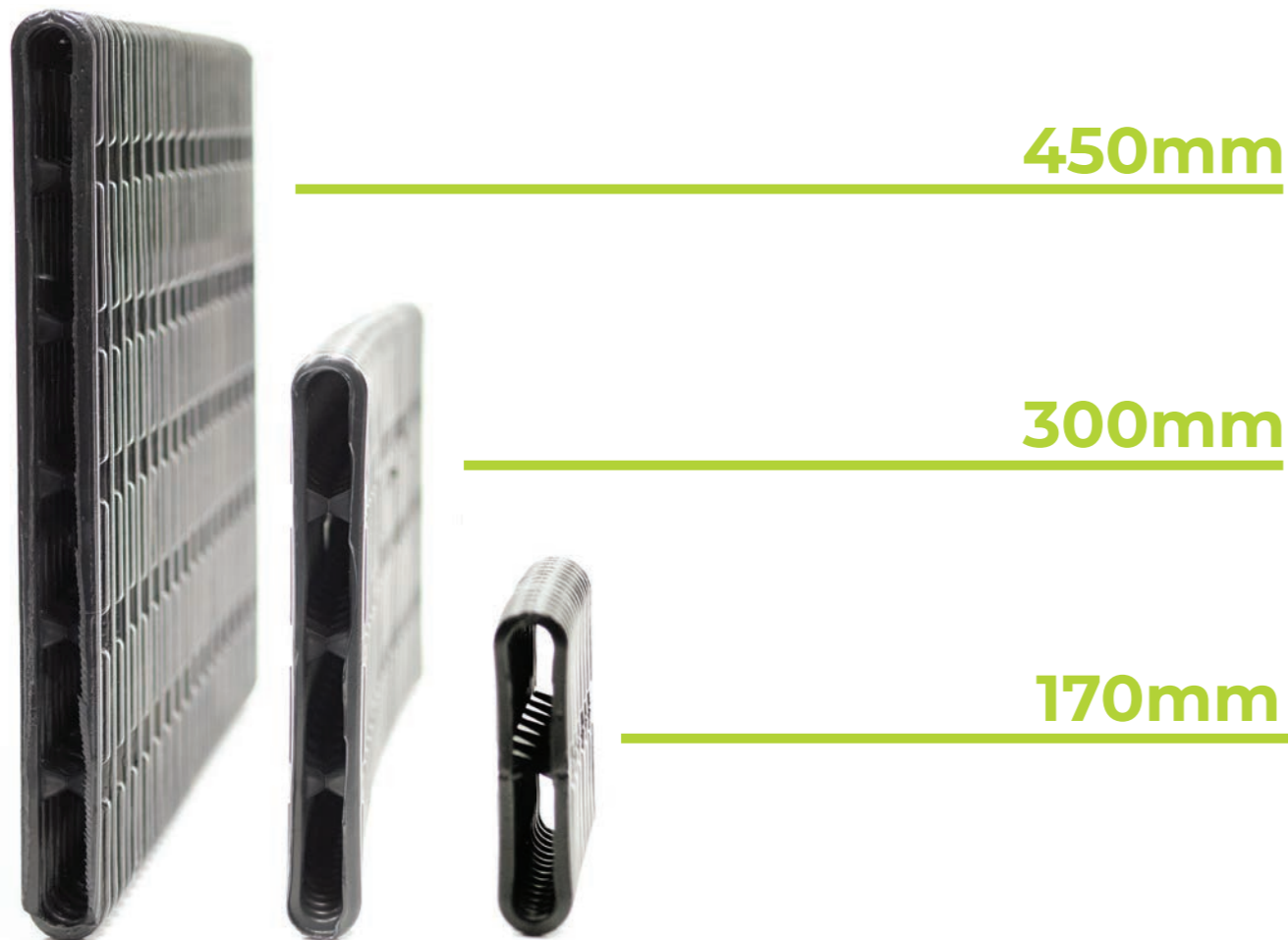
All Megaflo products come wrapped in the bidim geotextile. Prior to installation the following equipment will be required:

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

THE SIZES

There are three standard sizes of Megaflo rigid panel drains; 170mm, 300mm and 450mm. It is only 40mm thick in all sizes, making it ideal for cost savings in trench drainage.

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



CASEY FIELDS SOCCER FACILITY
INSTALLED BY TURF ONE



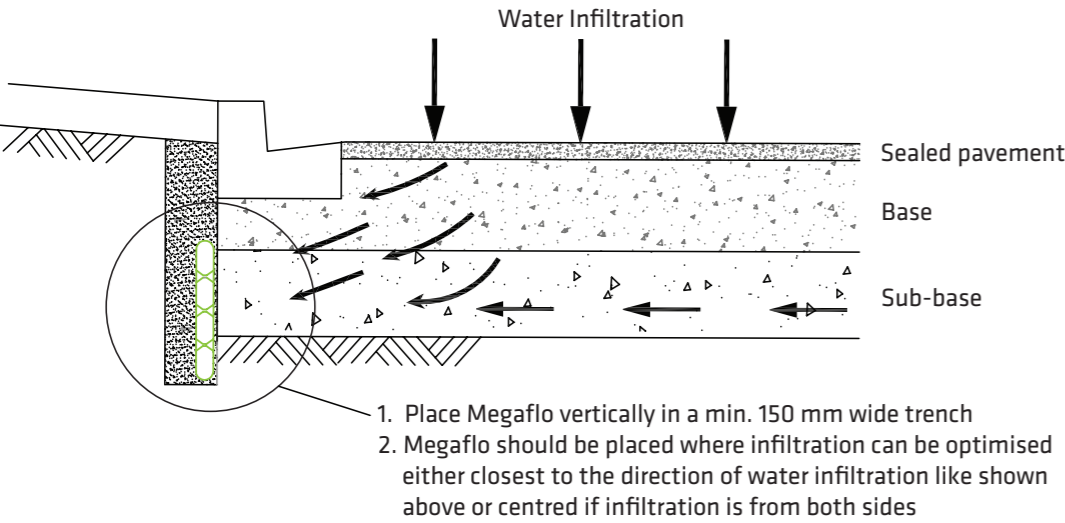
ROAD EDGE DRAINAGE

TRENCHING

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

Road installations of Megaflo rigid panel drain require at least 150mm cover. Road installations should be a minimum of 100mm to 150mm wide according to the road authorities specification or as specified in the construction drawings.

Bedding at trench invert is not required due to Megaflo'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 geotextile filter fabric 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 Megaflo 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, Megaflo should be located in the centre of the trench. Megaflo can be supported vertically in the trench by wooden stakes placed at approximately 10 metre centres.

BACKFILLING

BACKFILL REQUIREMENTS

Backfilling operations need to be undertaken with care, as during installation the surrounding backfill material will create load not only on the drainage core but the geotextile filter. Megaflo's ribbed design helps the geotextile filter resist damage during installation.

BACKFILL SPECIFICATION

Megaflo 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 150mm lifts to 95% standard compaction. Washed sand backfill can be watered in for effective compaction.

Compacted granular material around Megaflo should incorporate a cover layer to 150mm 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 Megaflo in accordance with the following guidelines.

No fines concrete and drainage aggregate backfill should be placed in accordance with the relevant specifications.

DRAINAGE AGGREGATE

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

WASHED SAND

Typical specification for coarse 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

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 10-20mm stone, water to cement ratio of 0.5 and cement density of 250kg/m³ is appropriate for installation with Megaflo.

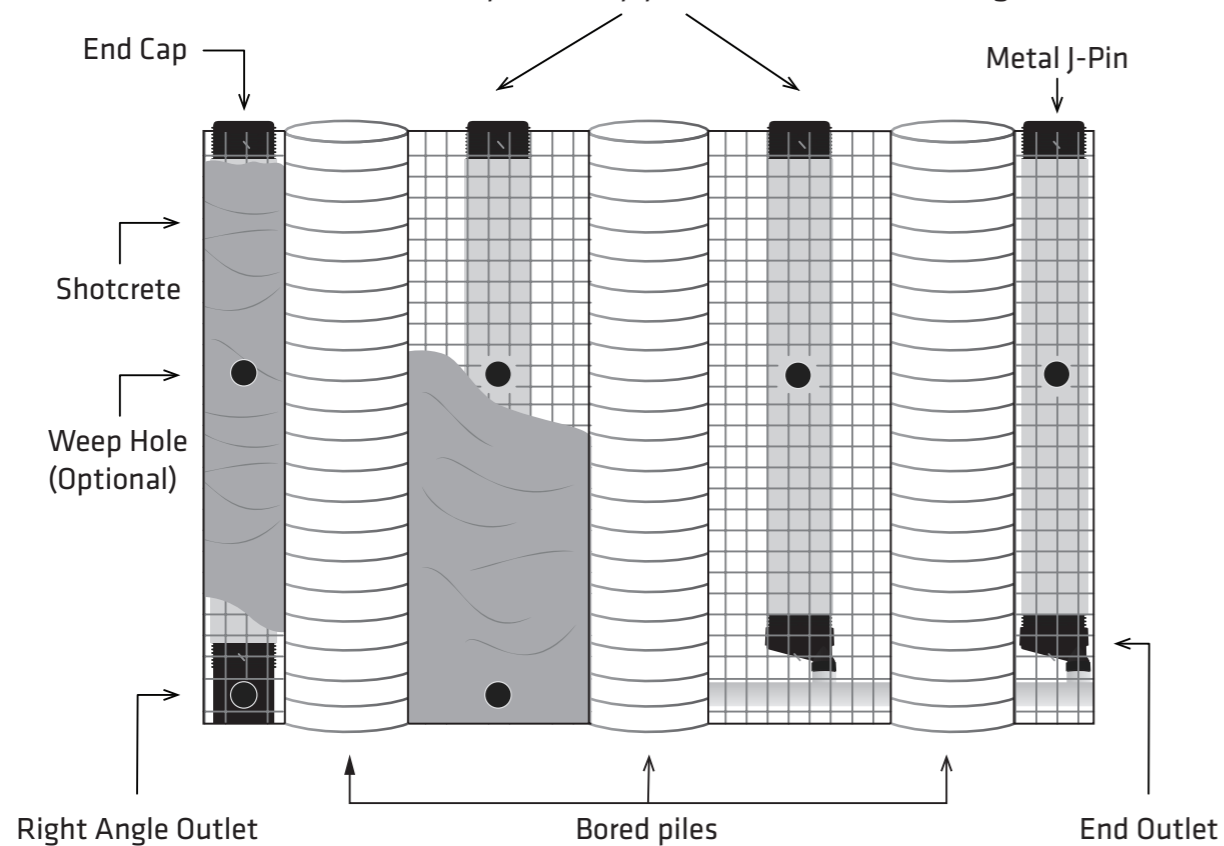
OTHER DRAINAGE MEDIA

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



SHOTCRETE & RETAINING WALL DRAINAGE

Place Megaflo 170mm at midpoint between piles. Megaflo shall run the full height of the wall. You can either have a weep hole at the base or you can connect it to a perimeter pipe with an end outlet fitting.



1. Cut Megaflo to length to match the height of the wall
2. Affix a Megaflo end cap to the top end of the pre-cut length
3. Place Megaflo lengths between bored piles
4. Hold Megaflo in place using a metal J pin driven into the wall surface on each side of the length as well as the top and bottom
5. Attach a standard Megaflo Right Outlet connector to the bottom of each length
6. Insert pre-cut length of 100mm diameter smooth bore round pipe into the standard Megaflo Right Outlet connector
7. Place and secure specified reinforcing mesh over entire surface
8. Spray shotcrete as specified
9. Cut 100mm diameter round pipe flush with wall surface.



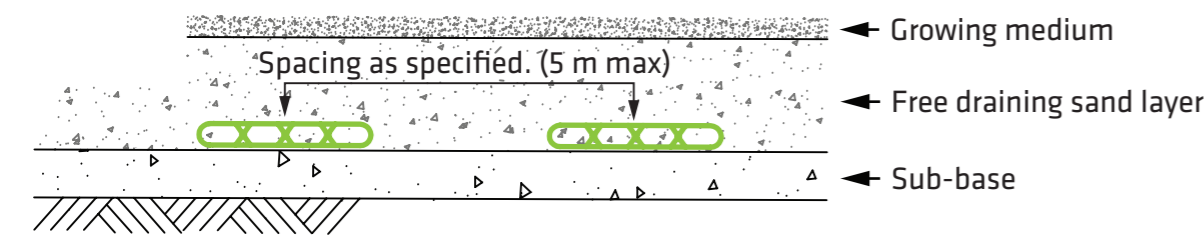
SPORTSFIELDS & TURF DRAINAGE

Removing surplus water from synthetic or natural turf sports fields and golf courses quickly is important so play can resume as soon as possible. Using Megaflo drainage panel allows the sports field surface to make a speedy recovery.

The Megaflo flat panel drainage system has been installed in sports fields all around the world, including world class stadiums, such as FIFA World Cup, cricket, athletics and football stadiums and is approved for use by USGA for both California Green Profile and USGA Gravel Profile.

Megaflo offers increased drainage performance when compared to conventional round pipe. The large surface area design of the Megaflo flat panel drainage system results in a water removal rate of almost twice that of a 100mm round pipe. The increased drainage performance of Megaflo means that sports field surfaces are quickly returned to a playable condition even in wet weather.

A distinct benefit of the Megaflo rigid flat panel drainage solution is its ease of installation. Its trench-less installation method means that once a surface has been prepared and leveled, the Megaflo panel drain 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.



SPORTSFIELDS & GOLF COURSES

In sportsfield and golf course applications we recommend that the construction drawings are followed to ensure 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 is laid flat, typically in either a herringbone or fish bone pattern. Spacings between rows of Megaflo should not exceed 5m.

Megaflo is available with or without the filter geotextile. In some applications the designer may want the filter geotextile cut during installation as seen above.



THE MEGAFLO FITTING GUIDE

There is a full range of fittings available for Megaflo to allow you to:

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

150MM U-PINS

4MM THICK



MEG450 HDPE LAY FLAT FITTINGS

AVAILABLE IN MEG450 SIZE ONLY



MEG45/30LFHX



MEG45/30LF/45



MEG45LF45



MEG45LFT



MEG45/30LFT



MEG45LFR



MEG45/45LFX



MEG45/45LF/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)

THE T-Y MULTI FITTING

AVAILABLE IN MEG170 SIZE ONLY

The Megaflo TY Multi Fitting is designed to provide flexibility when connecting sections of Megaflo 170 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.



THE MULTI FITTING

AVAILABLE IN MEG170 AND MEG300 SIZES

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



MFLF MULTI
(WITHOUT SLOTS)



MFLF MULTIS
(WITH SLOTS)



100%
RECYCLED
PRODUCT