

TERRACOVER II[®]

User Guide

Installation Instructions on Artificial Turf

This publication has been produced as an aide to installing your TERRACOVER II[®] System and accompanying Accessories. Whilst every care has been taken to ensure the contents are both thorough and accurate it should be used as a guide only.

All queries, technical questions etc, can be directed to:

Terraplas plc
Head Office
9 High Street
CASTLE DONINGTON
Derby
DE74 2PP

+44 (0) 1332 812 813

robertelse@terraplas.com

www.terraplas.com

Contents and Index

1.	Definitions Page 4 Section 1.1 Page 4 Section 1.2 Page 4 Section 1.3 Page 4 Section 1.4 Page 4 Section 1.5 Page 4 Section 1.6 Page 4 Section 1.7 Page 4 Section 1.8 Page 4 Section 1.9 Page 4 Section 1.10 Page 4 Section 1.11 Page 4 Section 1.12	Tile Panel Overlapping Edge Bevelled Edge Vertical Camlock T-Bar Tile Top Side Tile Underside Pull Cart Banding Edge Protector Aluminium Ramps
2.	Health & Safety Page 5 Section 2.1 Page 5 Section 2.2	Risk Assessments PPE
3.	Staff Requirements Page 6 Section 3.1	Team Breakdown
4.	Material Handling Page 6 Section 4.1 Page 7 Section 4.2 Page 7 Section 4.3	Forklift Use Pull Carts Utility Vehicles
5.	Pre-Lay Procedures Page 8 Section 5.1 Page 8 Section 5.2	Stringlines Stringline Diagram 'A'
6.	Laying Procedures Page 9 Section 6.1 Page 9 Section 6.2 Page 10 Section 6.2.1 Page 11 Section 6.3 Page 11 Section 6.4	Stringline Diagram 'B' Stringline Diagram 'C' The 'Step' Pattern Stringline Diagram 'D' Laying Direction
7.	Locking Procedures Page 12 Section 7.1 Page 12 Section 7.2 Page 12 Section 7.3	Camlocks T-Bars Damaged Camlocks
8.	Building Mixer / Delay Towers Page 13 Section 8.1	Load Spreading
9.	Accessories Page 14 Section 9.1 Page 15 Section 9.2 Page 16 Section 9.3	Cable Duct Tiles Edge Trims Aluminium Ramps
10.	Lifting Procedures Page 17 Section 10.1 Page 17 Section 10.2 Page 17 Section 10.3	Prior to Lifting Equipment Checklist Removal

- 11. Cleaning and Maintenance**
Page 18 Section 11.1 Equipment List
Page 18 Section 11.2 System Maintenance
Page 18 Section 11.3 Damage
Page 18 Section 11.3.1 Camlock Removal
Page 18 Section 11.3.2 Camlock Replacement
Page 19 Section 11.4 Damage to Overlapping Edges
- 12. Storage**
Page 19 Section 12.1 Pallets
Page 19 Section 12.2 Number of Sheets per Pallet
Page 20 Section 12.3 Pins
Page 20 Section 12.4 Stacking
Page 20 Section 12.5 Banding

1.1

Definitions

- 1.1 Tile
1 m² of Terracover II® is called a Tile.
- 1.2 Panel
Four Tiles are pinned together at the Factory to form a Panel (See Page 20 Section 12.3). Each Panel measures 4m².
- 1.3 Overlapping Edge
The two edges of the top side extend beyond the body of the Tile by 60 mm. This is the Overlapping Edge.
- 1.4 Bevelled Edge
The two edges of the top side have a recessed groove along the edge of the body of the tile and are called the Bevelled Edges.
- 1.5 Vertical Camlock
Each camlock has a slot in the top that can be seen on the top surface of the Tile and are used to secure one panel to the next.
- 1.6 T-Bar
A tool used to lock and unlock camlocks.
- 1.7 Tile Top Side
The top side has a surface incorporating the Terracover II® logo and an arrow which indicates installation direction.
- 1.8 Tile Underside
The underside is smooth with holes indicating the locations where the cones were formed during manufacture.
- 1.9 Pull Cart
Wheeled cart used to move the pallets when loaded with Tiles.
- 1.10 Banding
A strap placed tightly around a stack of Tiles which secures them to the pallet.
- 1.11 Edge Protector
L-Shaped pieces made of plastic or metal positioned along the stack edges to prevent the banding from damaging the Tile edges during storage or transportation.
- 1.12 Aluminium Ramp
Specially designed to allow access onto the System for forklifts, pull carts, foot traffic and disabled access.

2. Health & Safety

2.1 Risk Assessments:

Risk Assessments should be undertaken prior to commencement. An example is available on the Terraplas® website but it should be noted that this is an example only and specific modifications will be needed for each individual site.

2.2 PPE:

All personnel should be issued with PPE (personal protection equipment) including, but not limited to strong boots preferably with reinforced toe caps, high visibility vests and gloves. Advice should be provided on wearing appropriate clothing for specific weather conditions e.g. hats and shirts when working in full sun.



3. Staff Requirements

3.1 To achieve a fairly effortless lay, a team of around 33 people should be employed with a break down as follows:

1 Groundsman in ultimate charge

2 Supervisors

6 Teams of 4 – each team with 2 Placers and 2 Lockers.

4 Floaters, who move around as and where required, provide relief for rest breaks

2 qualified forklift Drivers.

(The 2 Placers and 2 Lockers should periodically change over to give the Placers a rest.)

4. Material Handling

4.1 Forklift Drivers should be given specific instructions relating to site access and strategic placement of materials to minimize the distance travelled between the storage area and the installation area. At stadiums that have a hard track around the field area it may be possible to place materials on their pallets adjacent to the field.



4. Material Handling (cont.)

- 4.2 Pull carts should be provided to keep movement of panels by hand to a minimum. A full pallet should be loaded onto each cart at the edge of the field by forklift.
- 4.3 Utility vehicles, forklifts and tractors fitted with Turf Tyres may be used on top of TERRACOVER II®.

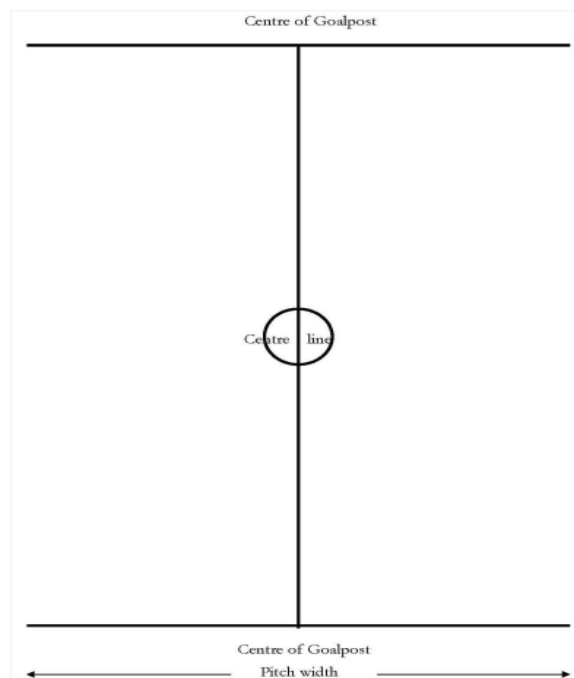


5. Pre-Lay Procedures

- 5.1 For correct laying of TERRACOVER II® it is essential to start exactly 'square', therefore time should be spent initially to make sure that there is a perfect 'stringline' in both directions.



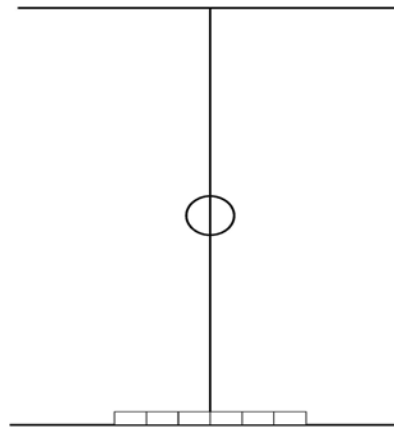
5.2 *Stringline Diagram 'A'*



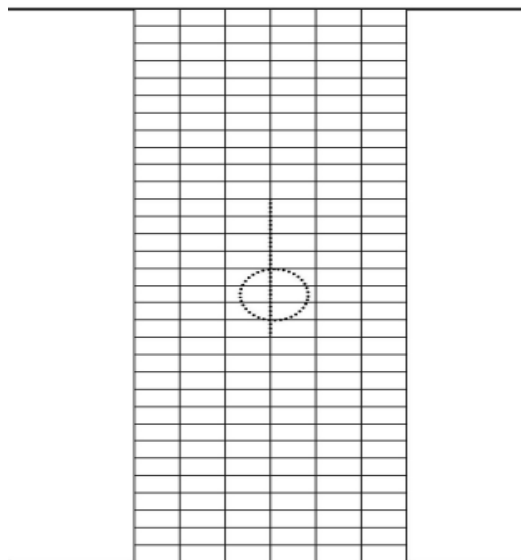
6. Laying Procedures

- 6.1 The first line of tiles going up and across the field needs to be placed exactly on the 'stringline' and each panel fully locked to those adjacent to it, prior to pulling out the expansion joints to their maximum.

Stringline Diagram 'B'



6.2 *Stringline Diagram 'C'*

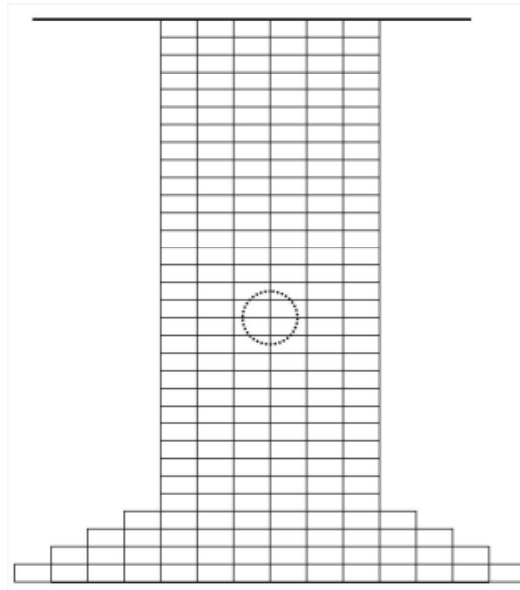


6.2.1 The 'Step' Pattern

Having achieved perfectly square lines of tiles as shown in Diagram 'C' the teams should commence placing and locking the panels – 3 teams in each direction always starting from the centre of the field and working outwards in the 'step pattern'.



6.3 *Stringline Diagram 'D'*



It is extremely important for the Placers to accurately position the tiles so that the Lockers do not have to move them – this speeds up the operation considerably and avoids attempts to lock misplaced tiles which cause misalignment and tightness.

6.4 3 teams lay in each direction:

- Team 1 always keeps ahead of Teams 2 and 3
- Team 1 locks first fully laid row
- Team 2 locks into Team 1's first row
- Team 3 locks into Team 2's row etc.

All Teams must remember camlocks run in a horizontal and vertical direction and all must be locked.

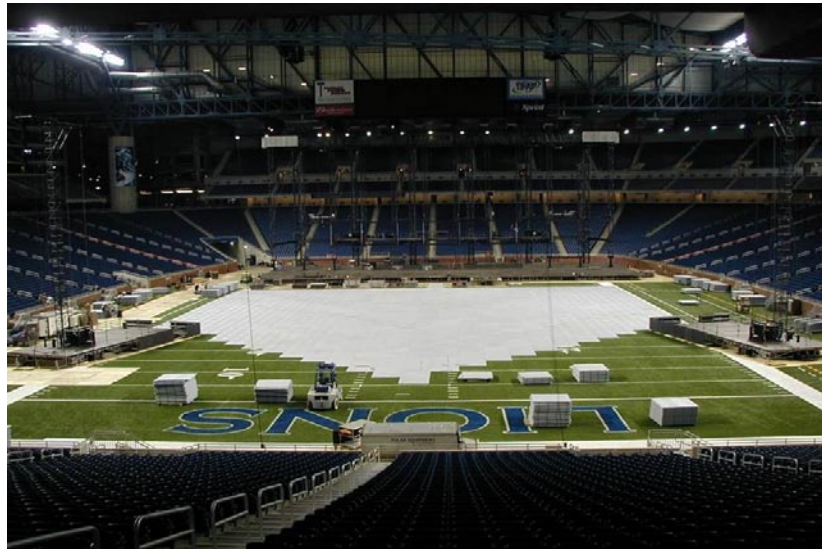
7. Locking Procedures



- 7.1 It should be remembered that the camlocks are designed to hold the tiles in position not pull them into position, so accurate placement of the tiles is vital.
- 7.2 The T-Bar used for locking the camlocks must be fully inserted into the slot on the top of the camlock before attempting to turn it. The T-Bar only requires one 90° turn in a clockwise direction to lock and one 90° turn in an anti-clockwise direction to unlock. Do not try and force any further as this will damage the lock
- 7.3 If any camlocks are damaged to the point where they cannot be locked these should be changed immediately, otherwise the system will not be fully locked which may result in misalignment. (See Page 5 Section 9.3 Changing Damaged Camlocks.)

8. Building Mixer / Delay Towers

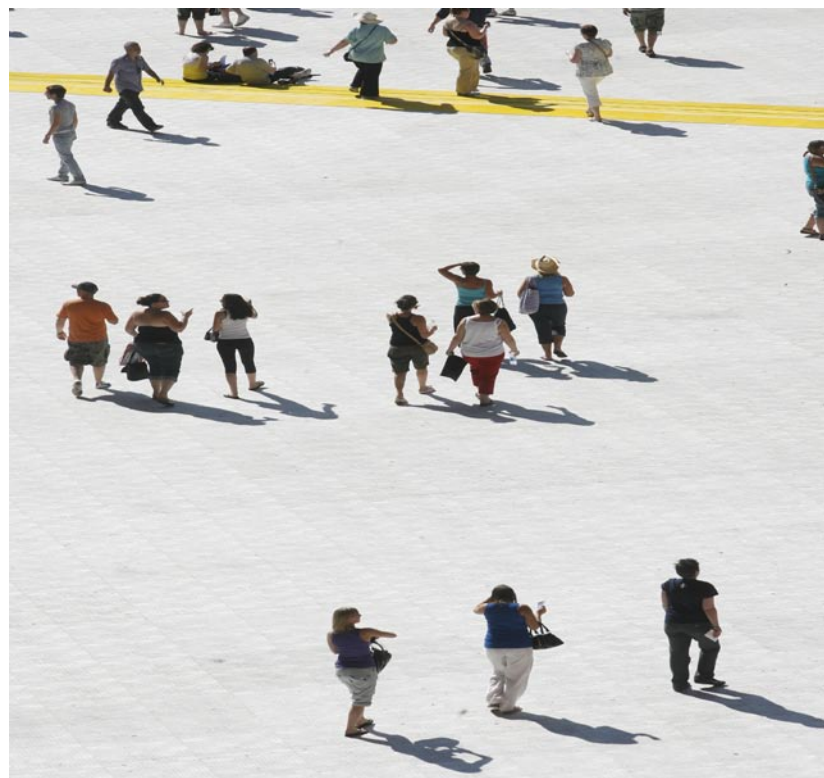
- 8.1 To protect the grass it is preferable to build the Mixer and Delay Towers on top of the TERRACOVER II[®]. Timber is the best way of spreading the load and the photographs below illustrate how this is done.



9. Accessories

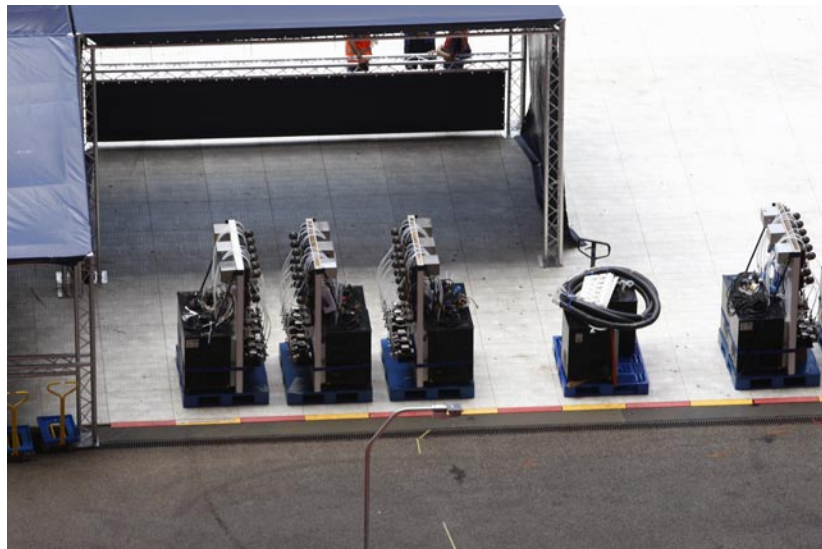
9.1 Cable Duct Tiles

Health & Safety make it compulsory that the public are adequately protected from cabling. The use of Cable Ducts, shown here in yellow, ensures public safety and makes it possible for cables to go in any direction.



9.2 Edge Trims

To protect the public from 'trip hazards' Edge Trims in alternating colours of red and yellow can be placed under the TERRACOVER II® quickly and easily.



9.3 Aluminium Ramps

To comply with D.D.A. (A.D.A.) rules, wheelchair Ramps can easily be positioned where required.



10. Lifting Procedures

- 10.1 Before any removal procedures are commenced it is essential to brush the System surface both ways ensuring no debris goes on to the field.



- 10.2 Prior to lifting any of the panels, ALL camlocks must be unlocked. Allocate each person a line to do, both along its length and width.
- 10.3 The removal procedure is a direct reversal of the lay – each pallet is taken to the side of the field, where the forklift takes the pallet off the trolley prior to banding.

Under no circumstances should a full pallet be moved without banding.

11. Cleaning and Maintenance

- 11.1 To maintain your TERRACOVER II® System in pristine condition it should be thoroughly cleaned between events using a high pressure washer and brush to remove any stubborn marks, chewing gum etc.

Under no circumstances should any silicone based cleaning fluids be used.

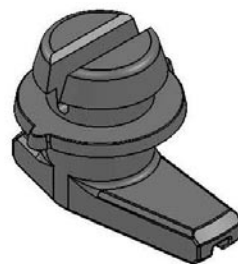
- 11.2 Personnel should look for any broken camlocks or pins and replace as required. Once the system has been cleaned, maintained and banded it can be returned to storage. If stored outside covering is recommended. This ensures your TERRACOVER II® System remains in perfect condition and is ready for its next use.



11.3 Damage

- 11.3.1 In the event of a camlock becoming damaged, replacement is very quick and easy. The System is supplied with all tools required and consists of a metal drift, a block of wood and a rubber hammer.

- 11.3.2 The old camlock is removed by lifting the edge of the tile in the area of the camlock onto the wooden block. Place the drift in the T-Bar slot and knock out using the rubber hammer. The new camlock is placed underneath the tile in its correct position and using the rubber hammer on top of the tile pops the cam into position.



11. Cleaning & Maintenance (cont.)

11.4 Damage to Overlapping Edges

If any of the Overlapping Edges are bent due to banding or other stress use pliers to grip and straighten the edge.

12. Storage

12.1 Pallets

It is recommended that pallets be made with three 10cm x 10cm runners used to construct the underneath side of the Pallet with four 5cm x 15cm cross members on the top side.

All Pallets should measure 2 sqm.

12.2 Number of Sheets per Pallet

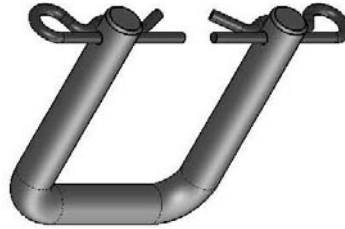
It is recommended for each Pallet to have 20 Panels (80 pre-pinned Tiles). Pallets may be carried by a forklift two at a time.



12. Storage (cont.)

12.3 Pins

Each panel consists of 4 Tiles which are connected by a u-shaped pin during manufacture.



12.4 Stacking

Place the first Tiles top side up. Place the second Tile underside up. Continue the pattern with the final Tile underside up.

This stacking pattern helps to protect the Overlapping Edges and allows any Tiles that have been subjected to heavy weights to 'flatten out'.

12.5 Banding

During transit to Storage, at least two bands are needed on each Pallet of Panels.