

Installation Guide

TRACKCELL® FOR HAUL ROADS & ACCESS ROADS



Installation guidance

Applications: Solar farms, wind farm haul roads, construction access & maintenance routes.

Support & Technical Assistance

If you are unsure about any aspect of this guide or your site conditions, please contact us.

We offer:

- Free technical recommendations and cross section design
- Site visits
- Training and CPD seminars

Pre Installation Checks

If ground conditions are uncertain, we strongly recommend California Bearing Ratio (CBR) testing. This assessment confirms whether the specified solution will perform as intended and helps ensure compliance with best practice guidelines for haul road construction.

Key Requirements

- Avoid excavation and subgrade compaction beyond the agreed no dig or minimal dig design.
- Obtain approval from the relevant project authority (e.g., Principal Contractor/Engineer) confirming the design and construction method is acceptable.
- Plan for drainage: provide crossfall/longitudinal fall, edge drains or culverts to prevent saturation of the structural layer.
- Aggregate Selection: Choose or blend aggregates (stone, sand, recycled) to achieve the required stiffness, permeability, and durability.
- Layer Thickness Optimisation: Calculate the depth of Trackcell® and infill to spread loads effectively.
- Cost Engineering: Compare options (e.g., recycled vs. virgin aggregate) for material and transport savings.
- Compliance: Ensure design meets BS7533, DMRB, and MCHW standards.
- Design for reinstatement: Aggregate choice should allow easy removal or natural integration into the soil after project completion.
- Use 30% void space aggregate for infill and 10% void wear layers: design available.

Manual Handling Guidance

Trackcell® panels weigh **62 kg** and care must be taken when handling them to prevent injury and ensure safe working practices. Appropriate lifting techniques or team handling should be used.

- **Panel depth:** 200 mm (single size)
- **Panel size (expanded):** 4.10 m × 9.12 m
- **Panel weight:** 62 kg

Always follow site-specific health and safety protocols. **Standard site PPE must be worn at all times**, including:

- **Safety gloves** – to protect hands during handling
- **Safety glasses** – to prevent eye injuries from debris
- **Safety boots** – to protect feet from impact and provide stability

Consider mechanical assistance for larger quantities or extended handling.

Note: Use team lifting and/or mechanical assistance. Follow site specific RAMS and H&S protocols at all times.

Installation Method



Prepare Surface



Lay Geotextile



Lay out Trackcell®

Step 1 – Prepare the Surface

1. Remove surface vegetation.
2. Clear loose rocks, debris, and organic material.
3. Do not roll or compact the natural subgrade; avoid excess cutting/levelling high spots.
4. Localised subbase permitted as per design.

Installation Method

Step 2 – Lay out the Geotextile

- Ensure full coverage of the prepared surface.
- A regulating course of unconfined stone may be used on top of the geotextile.
- Extend geotextile at least **300 mm** beyond perimeter.
- Overlap joints: **300–750 mm** depending on CBR.

Step 3 – Lay Out the Trackcell® Panels

- Position collapsed panels on geotextile.
- Insert J pin into centre cell at one end: secure during expansion.
- Expand to full length and width, pin corners.
- **Panel size:** 4.10 m × 9.12 m
- Use **16 J pins per panel** evenly spaced.
- **Cell aperture:** ≈315 mm × 304 mm

IMPORTANT: Fully expand and keep under tension.

Step 4 – Connect Panels (Cell-Ties)

Infill and Wearing Course

The choice of infill material and surface finish should be designed to suit your project's loading, drainage, and environmental requirements. Options include clean angular stone, Type 3 or Type 1 aggregate, sand, and recycled materials. Our engineering team can provide a tailored design to meet your performance and cost objectives.

Step 5 – Infill

- Compact infill only (not subgrade) in thin lifts; maintain tension.
- **Maintain 25 mm overfill** during compression.
- If Trackcell® becomes visible, re dress with stone and re roll.

Step 6 – Wearing Course

- Select finish appropriate to traffic and drainage goals.

Compression Requirements

- Compression must be carried out using **dead rolling only**.
- **Do not use vibration.**
- Always follow site-specific health and safety protocols.

IMPORTANT NOTES

Herbicide Use

- Herbicides must be appropriate for vegetation.
- Follow manufacturer instructions and warnings.
- Avoid damage to retained trees and sensitive habitats.

Geotextile Installation

- Overlap requirements:
 - **CBR > 3%:** 300 mm
 - **CBR 1–3%:** 500 mm
 - **CBR ≤ 1%:** 750 mm

Design Guidance (Summary)

- Depth: 200 mm
- Panel size: 4.10 m × 9.12 m
- Cell aperture: ≈315 mm × 304 mm
- Pins: 16 per panel
- Connectors: Cell Lock
- Geotextile overlaps: 300–750 mm
- Drainage: Provide crossfall and edge drains
- Optional: Add geogrid for very low CBR soils

Installation Method

Performance & Benefits

- Enhanced load bearing for heavy traffic
- Reduced excavation and aggregate
- Fast installation
- Environmental protection
- Long-term durability
- Supports sustainability goals

Quality & Safety Checks

- Confirm full expansion and tension
- Verify connector engagement
- Check pin count and placement
- Validate infill gradation and compaction
- Inspect drainage paths and edges

Specifications (Quick Reference)

- Panel Size: 4.10 m × 9.12 m
- Depth: 200 mm
- Weight: 62 kg
- Cell Aperture: ≈315 mm × 304 mm
- Pins: 16 per panel
- Connectors: Cell Lock
- Infill: Well graded granular material with maximum particle size of 63mm.
- Finish: As per design

Technical Support

For CBR interpretation, depth selection, cross-section design, drainage, or environmental constraints, contact our technical team. We provide free technical recommendations, site visits, and CPD seminars.

About Geosynthetics

About Us

Not just a product supplier, Geosynthetics Limited promotes and leads innovation throughout the UK to deliver sustainable geosynthetic solutions for an improved environment.

Using extensive knowledge of product and applications the company have an enviable reputation for technical excellence and customer service, offering next day delivery and free engineering support to achieve the desired objectives, save time, reduce carbon and cost wherever possible.



Our Best Service



Next Day Delivery

Our fully stocked distribution center established in the East Midlands makes UK direct to site next day deliveries possible.



Free Engineering Service

Our Engineering Department (Staffed by fully qualified civil engineers) has been created to give you free technical support and to provide solutions involving our range of products.



Large Stock Holding

We hold over £2m worth of stock in our East Midlands distribution centre allowing us to enable quick order turnarounds.



Site Visits

Our team includes industry experts offering you support & advice throughout your order process. This enables us to offer services such as site visits to assist you with choosing the best solution for your project.

Get in touch



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