

Securing the Future with Engineered Geosynthetics - **GCL & GCCM**

Global Leaders in Sustainable Containment & Waterproofing

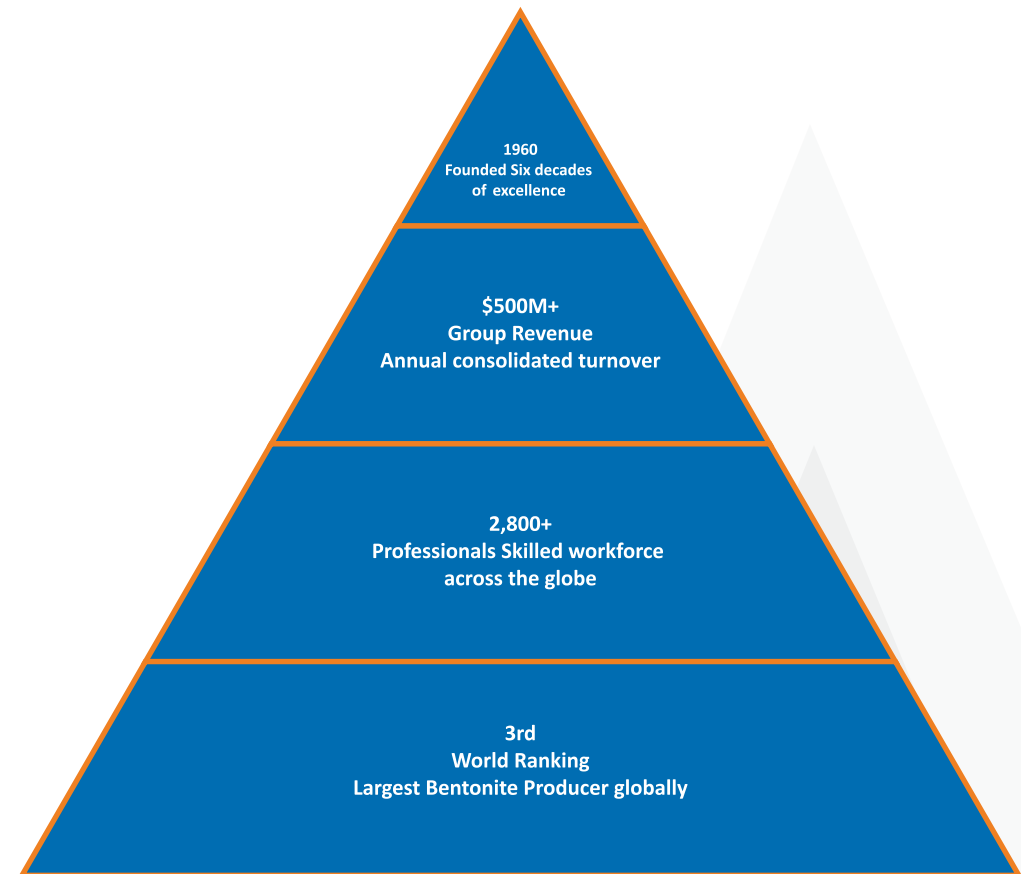




Six Decades of Industrial Leadership



Founded in 1960 and publicly listed on the BSE & NSE since 1993, Ashapura Group has evolved from a regional mining enterprise into a globally recognised materials and engineering solutions provider & trusted by infrastructure developers and environmental firms worldwide.





Engineered For Global Scale. Certified For Performance



Ashapura Group is a globally certified **Mine-to-Market** manufacturer controlling every stage from raw bentonite extraction to finished GCL & GCCM delivery. Our infrastructure is built to meet the rigorous demands of World's mega-infra projects.

We own and operate our own bentonite mines for our GCL production.

25,000

**Sq. m./Day
Production
Capacity**

100+

**Year Service Life
Target Design Life For
Tunnel Waterproofing**

4

**Global Compliance
CE, ASTM, GRI-GCL3, ISO
Compliant**





Applications

Versatile Solutions For Diverse Industries



GCL Applications

- Mining Operations
- Landfill Projects
- Oil, Gas & Energy Projects
- Water Containment
- Agriculture & Aquaculture
- Infrastructure & Tunnels
- Waterproofing Solutions
- Waste Management Projects

GCCM Applications

- Hydraulics & Channels
- Slope Protection
- Containment & Bunds
- Drainage & Culverts
- Infrastructure Remediation
- Transportation & Highways
- Mining & Energy
- Reinforced Soil Structures (RSS)



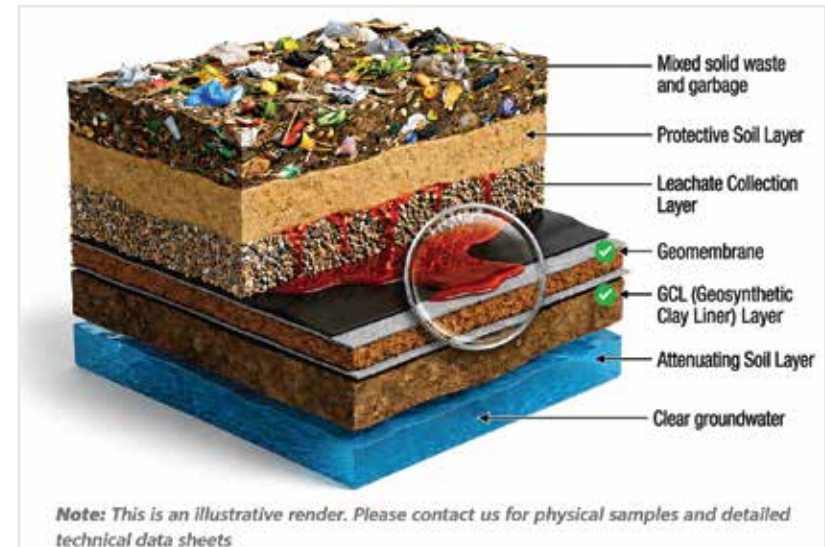
GCL Introduction

What is GCL?

A Geosynthetic Clay Liner (GCL) is a high-performance engineered composite that combines premium sodium bentonite clay with geotextiles to deliver extremely low hydraulic conductivity, making it the preferred choice for critical containment applications worldwide. The bentonite core swells upon contact with moisture, forming an impermeable barrier with hydraulic conductivity as low as $\leq 5 \times 10^{-11} \text{ m/s}$, outperforming compacted clay liners in most conditions.

A Smart Barrier.

An impermeable geomembrane laminated to a low-permeability liner with self-sealing characteristics. By utilizing a uniform, factory-engineered bentonite core locked together by needle-punched geotextile, a single GCL layer replaces heavy clay while delivering superior, predictable containment & massive interface shear strength.





Ecoklay SPL 40



Ecoklay SPL 40 RI



Ecoklay LWP



Ecoklay SPL 40 NT



Domestic Projects



5,61,000 sq. m. Geoklay 350 Waste Management Project, Hyderabad



40,000 sq. m. Ekoklay SPL 40 Solid Waste Management Project, Rajkot



50,000 sq. m. Ekoklay SPL 40 Waste Management Project, Aurangabad



1,80,000 sq. m. Geoklay 350 Runway Project, Pakyong, Sikkim Airport



Domestic Projects



5,000 sq. m. Ponds Lining Project, GKVK
Agriculture University, Bangalore



3,000 sq. m. Koviloor Check Dam, Soil
Conservative Project, Kerala



4,000 sq. m. Pond Lining Project, Munnar, Kerala



6000 sq. m. Pond Lining Project, Munnar,
Idukki District, Kerala



International Projects



1,20,000 sq. m. Ecoklay SPL 40 Landfill Project,
South Korea



1,00,000 sq. m. Ecoklay LWP Landfill Project,
Malaysia



8,000 sq. m. Ecoklay LWP Pond Sealing Project,
United Kingdom



10,000 sq. m. Ecoklay SPL Pond Lining Project,
Belgium



International Projects



4,000 sq. m. Ecoklay LWP Pond Lining Project,
United Arab Emirates



7,00,000 sq. m. Ecoklay LWP Landfill Project,
West Papua, Indonesia



Ecoklay LWP, Basement Waterproofing
Project



6,800 sq. m. Ecoklay SPL Land Filling Project,
Colombia



GCL Project References



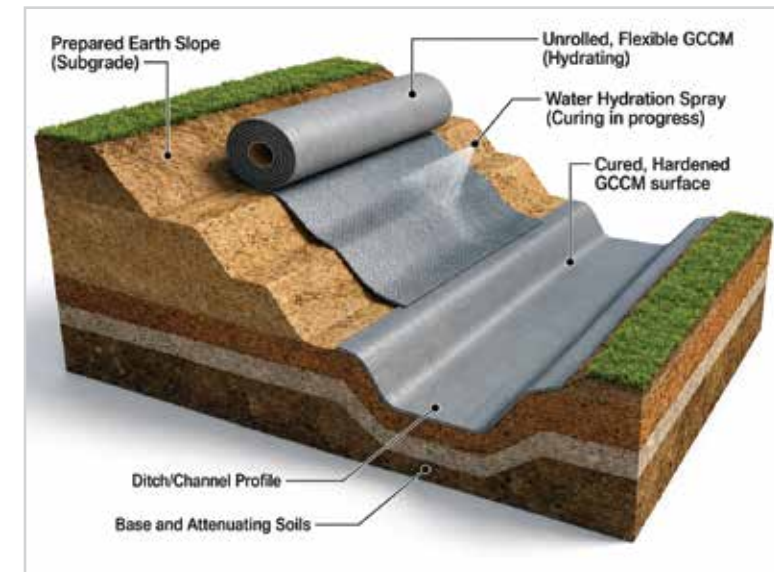
Region	Client / Entity	Site / Location	Category	Area (sq. m.)	Application
Australia	New South Wales Landfill	New South Wales	Landfill	10,400	Landfill Capping
Australia	Landfill Capping Project	New South Wales	Landfill	9,000	Landfill Capping
India	Indian Oil Corporation Ltd.	Dwarka	Oil & Gas	23,000	Pipeline Infrastructure
India	Indian Oil Corporation Ltd.	Jaipur	Oil & Gas	20,000	Crude Oil Dyke Facility
India	Municipal Corporation	Wardha	Solid Waste	4,800	Solid Waste Mgmt.



GCCM Introduction

A Geosynthetic Cementitious Composite Mat (GCCM), such as **Cretematt** and **Creteroll**, is a flexible, concrete-filled geotextile that hardens upon hydration to form a durable, waterproof, and fire-resistant concrete layer. It is essentially a flexible concrete mat, allowing for rapid and easy installation without the need for traditional mixing equipment or formwork.

GCCM solutions combine the mechanical properties of geosynthetics with the durability of concrete. When hydrated (either by spraying water or by rainfall), the specialized dry cement mix within the fiber matrix sets and cures, creating a robust erosion control and containment solution with significantly higher compressive strength than traditional compacted clay liners.



Why to Choose our GCCM?

- **Rapid Installation:** Up to 10 times faster installation compared to conventional concrete solutions.
- **Low Logistics:** Lightweight rolls reduce transportation costs and simplify on-site handling.
- **Eco-Friendly:** Lower carbon footprint compared to traditional concrete applications.
- **Versatile Application:** Ideal for channel lining, slope protection, bund lining, and weed



Cretematt



Creteroll



Domestic Projects



19,000 sq. m. Mining Operations Cretematt Project,
Surjagar Hills, Etapalli, Gadchiroli, Maharashtra



10,000 sq. m. Creteroll Rain Water Catch
Drain Canal, Project, Igatpuri



15,000 sq. m. Cretematt Border Road Organisation
(BRO) Road Side Project, Bhutan



15,000 sq. m. Cretematt Railway Project,
Rahul Kela, Odisha



Ashapura's Manufacturing Facility

Scale of Production

Ashapura operates one of the most capable manufacturing facilities in the region, with a production capacity of **25,000 sq. m. per day**, ensuring reliable supply for large-scale international projects.

Quality Infrastructure

A fully equipped, in-house standard testing laboratory conducts rigorous quality control at every stage: from raw bentonite sourcing to finished product dispatch which is guaranteeing consistent performance.

Capacity

- Geosynthetics Clay Liner (GCL) **20,000 sq. m. per day**
- Geosynthetic Cementitious Composite Mats (GCCM) **5,000 sq. m. per day**





Complied Performance, Delivered at Scale

Ashapura's manufacturing infrastructure is built to meet the volume, Quality, & compliance requirements of India's largest national Infrastructure programmes.



ISO 9001:2015

Quality Management System

ISO 14001:2015

Environmental Management

CE Certified

European Conformity Standard

ASTM & GRI-GCL3

International Geosynthetic Standards

Addressing: MoRTH, MoC & MoMin Demands

Meeting precise MoRTH, MoC, and MoMin tender specifications for government projects.



Manufacturing & Marketing Across Continents

Dedicated commercial teams in **Beijing**, and **UAE** provide on-ground technical support, export readiness, and client relationship management.

→ **Belgium**

European processing & distribution hub

→ **Guinea**

West Africa mining & processing

→ **Oman**

Middle East operations & logistics

→ **Malaysia**

South-East Asia manufacturing





Sustainability in Action



Renewable Energy Solar - Powered Processing

- ~50% of grinding operations supported by solar power
- Solar -generated electricity also utilized in MAP
- Continuing to increase renewable energy use

Electrifications Electric Material Handling

- ~50% of forklifts are electric
- ~10–15% of dumpers are electric
- EV adoption is being progressively expanded

Process Efficiency Controlled Mineral Processing

- MAP operations are supported by solar-generated electricity
- Continually evaluating energy-efficiency opportunities



CSR Activities



Vande Mataram Memorial

- Established in 2017 as India's first 4D memorial dedicated to the freedom struggle, constructed over 4 years with inputs from prominent historians, architects, sculptors and artists
- Showcases the most important episodes from the epoch between 1857 to 1947
- The 12-acre memorial houses the 100,000 sq. ft primary structure modeled on India's Parliament Building and a 50,000 sq. ft secondary structure modelled on the Red Fort having an auditorium, gallery, library and a food court
- Till date footfall of over 1 million people



Hiralaxmi Memorial Craft Park

- Established in 2005
- With an objective to revive and support the cultural essence of Kachchh, its arts, crafts and folk life
- Supported and provided shelters, financial aids and a platform to thousands of artisans from Kachchh for over 20 years
- Acclaimed by the State Government & Tourism Board

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