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## 8. IMR REPORT

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SMITH ZANDER

Date: 23 SEP 2024

The Board of Directors

**Fibromat (M) Berhad**  
Wisma Fibromat  
574, Jalan Samudra Utara 1  
Taman Samudra  
68100 Batu Caves  
Selangor

Dear Sirs/Madams,

**Independent Market Research Report on the Geotechnical Solutions Industry in Malaysia (“IMR Report”)**

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This IMR Report been prepared by SMITH ZANDER INTERNATIONAL SDN BHD (“SMITH ZANDER”) for inclusion in the draft Prospectus in conjunction with the proposed initial public offering and listing of Fibromat (M) Berhad on the ACE Market of Bursa Malaysia Securities Berhad.

The objective of this IMR Report is to provide an independent view of the industry and market(s) in which Fibromat (M) Berhad and its subsidiary (“Fibromat Group”) operate and to offer a clear understanding of the industry and market dynamics. Hence, the scope of work for this IMR Report will thus address the geotechnical solutions industry in Malaysia.

The research process for this study has been undertaken through secondary or desktop research, as well as detailed primary research when required, which involves discussing the status of the industry with leading industry participants and industry experts. Quantitative market information could be sourced from interviews by way of primary research and therefore, the information is subject to fluctuations due to possible changes in business, industry and economic conditions.

SMITH ZANDER has prepared this IMR Report in an independent and objective manner and has taken adequate care to ensure the accuracy and completeness of the report. We believe that this IMR Report presents a balanced view of the industry within the limitations of, among others, secondary statistics and primary research, and does not purport to be exhaustive. Our research has been conducted with an “overall industry” perspective and may not necessarily reflect the performance of individual companies in this IMR Report. SMITH ZANDER shall not be held responsible for the decisions and/or actions of the readers of this report. This report should also not be considered as a recommendation to buy or not to buy the shares of any company or companies as mentioned in this report or otherwise.

For and on behalf of SMITH ZANDER:

  
\_\_\_\_\_  
DENNIS TAN  
MANAGING PARTNER

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The research for this IMR Report was completed on 19 September 2024.

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**About SMITH ZANDER INTERNATIONAL SDN BHD**

*SMITH ZANDER is a professional independent market research company based in Kuala Lumpur, Malaysia, offering market research, industry intelligence and strategy consulting solutions. SMITH ZANDER is involved in the preparation of independent market research reports for capital market exercises, including initial public offerings, reverse takeovers, mergers and acquisitions, and other fund-raising and corporate exercises.*

**Profile of the signing partner, Dennis Tan Tze Wen**

*Dennis Tan is the Managing Partner of SMITH ZANDER. Dennis Tan has over 26 years of experience in market research and strategy consulting, including over 21 years in independent market research and due diligence studies for capital markets throughout the Asia Pacific region. Dennis Tan has a Bachelor of Science (major in Computer Science and minor in Business Administration) from Memorial University of Newfoundland, Canada.*

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**1 OVERVIEW OF THE GEOTECHNICAL SOLUTIONS INDUSTRY IN MALAYSIA****Introduction**

Geotechnical solutions refer to the provision of design and installation solutions for various geotechnical and civil engineering applications to manage and address challenges related to the performance of soil. Fibromat Group is principally involved in the provision of geotechnical solutions for erosion control, ground improvement, as well as sediment control, filtration and containment lining. As such, the geotechnical solutions industry in the context of this report refers to geotechnical solutions provided for the purpose of erosion control, ground improvement, as well as sediment control, filtration and containment lining.

Geotechnical solutions are aimed at ensuring the stability and integrity of soil, and consequently the safety of infrastructure and properties built on it. Generally, these solutions are adopted in engineering and construction projects to prevent soil erosion caused by natural elements or human activities; improve soil condition and fertility; modify ground properties in terms of strength, stability, capacity or density; improve moisture retention or permeability; promote the growth of vegetation; assist with drainage; prevent seepage and pollution; filter sediments; and manage water quality and for environmental protection. Geotechnical solutions may also be performed for landscaping or beautification purposes; and can be temporary, medium-term or permanent.

Geotechnical solutions designed for the application of erosion control, ground improvement, as well as sediment control, filtration and containment lining are further described below:

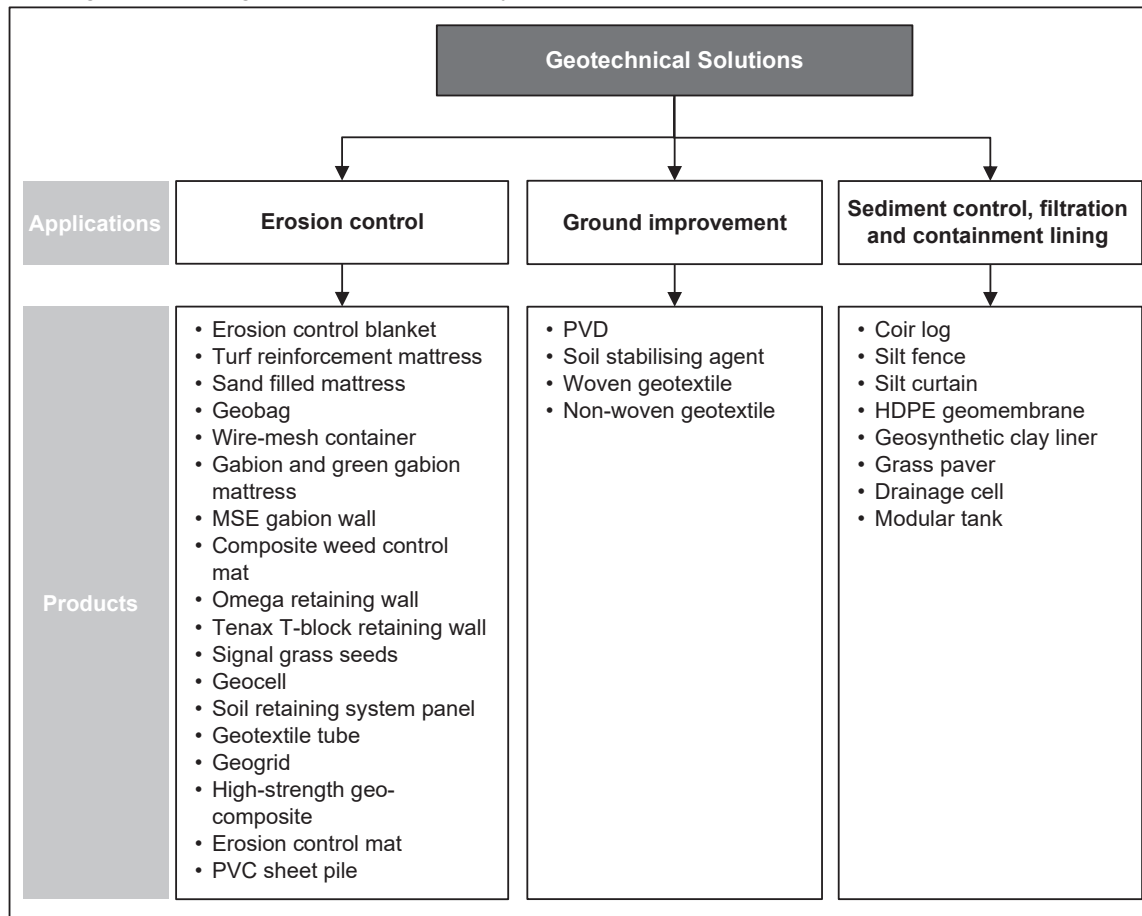
- Erosion control comprises engineering techniques administered to maintain soil stability, reduce the risk of flood and landslides, prevent damage to infrastructure and properties, protect water quality and preserve natural habitats. Erosion can be caused by natural elements such as wind or water, as well as human activity such as construction, agriculture, deforestation and mining. Some examples of erosion control techniques include vegetative cover (e.g. using erosion control blankets), hydroseeding and hydromulching (e.g. using signal grass seeds) and installing retaining walls;
- Ground improvement comprises engineering techniques administered to improve the properties of the soil to increase its strength and load-bearing capacity to withstand the weight on its surface, densify soil to improve soil strength and compactness and to reduce soil settlement (i.e. downward movement of the soil when load is applied on it), and decrease permeability of water to reduce soil movement. Some examples of ground improvement techniques include installing prefabricated vertical drains ("PVD") that act as drainage paths for excess pore water in soft compressible soil to escape thus accelerating the soil consolidation process, mixing of soil with other mediums to increase soil mass, densifying soil by mechanically reducing its void ratio and increasing its relative soil density, injecting fluid material to fill voids, and installing geotextiles to provide tensile strength and enhance load-bearing capacity as well as separate different soil layers to prevent mixing thus maintaining the stability of soil; and
- Sediment control, filtration and containment lining comprises engineering techniques administered to prevent soil particles and sediment from flowing into bodies of water which causes pollution and flooding, remove suspended particles and contaminants from water as it passes through a filtration medium, and/or to ensure the integrity and stability of containment structures, landfills, ponds, and reservoirs, and reduces the risk of environmental contamination and groundwater pollution. Some examples of sediment control, filtration and containment lining techniques include the use of silt fences or coir logs to capture sediment-laden water and surface run-off, silt curtains to capture and retain suspended particles and contaminants while allowing water to pass through, and installation of impermeable barriers such as geomembranes or geosynthetic clay liners to contain fluids, prevent seepage and protect underlying soil and groundwater from contamination or degradation.

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**Segmentation of geotechnical solutions by applications and products used**

The segmentation of geotechnical solutions by applications and the products used is as follows:



Note:

- The examples above are not exhaustive. These are products offered by Fibromat Group.

Source: SMITH ZANDER

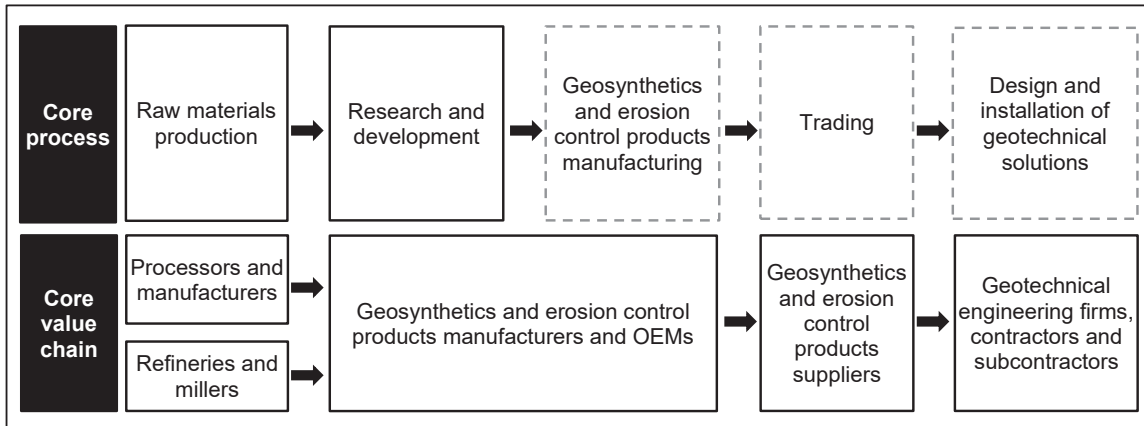
Geotechnical solutions may either precede other civil and structural works related to the construction of buildings or infrastructure, or may be conducted after construction as a form of remediation. Different solutions may be adopted to suit a variety of applications in civil engineering, construction and environmental protection such as different terrains, slopes, coastal beaches, riverbanks, embankments, ponds and tanks. The provision of geotechnical solutions for erosion control, ground improvement, as well as sediment control, filtration and containment lining generally utilises the following type of materials:

- **Synthetic materials** such as polypropylene, polyester, polyethylene and polyvinyl chloride are polymers or hydrocarbon chains that are derived from petrochemicals, which are by-products of crude oil refining. Some examples of products made from synthetic materials include woven geotextiles, non-woven geotextiles, geobags, geogrids, geomembranes, geocells and soil retaining system panels. These products are used for medium-term and permanent applications, as they are less susceptible to biodegradation;
- **Natural or biodegradable materials** comprise the use of natural biomass substrates such as palm fibre, coconut fibre and paddy straw, to allow the natural materials to biodegrade over time, consequently improving soil fertility and promoting vegetation growth; and
- **Composite materials** comprise the combined use of synthetic materials with other materials such as natural/biodegradable materials, clay or concrete. Some examples of composite materials include erosion control blankets, turf reinforcement mattresses, coir logs, MSE gabion walls and geosynthetic clay liners.

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**Value chain of the geotechnical solutions industry**

The value chain of the geotechnical solutions industry in Malaysia is as follow:



Note:

- [Dashed border] denotes the involvement of Fibromat Group in the value chain of the geotechnical solutions industry.

Source: SMITH ZANDER

The geotechnical solutions industry value chain involves multiple core processes, namely raw materials production, research and development, geosynthetics and erosion control products manufacturing, trading, as well as design and installation of geotechnical solutions using geosynthetics and erosion control products:

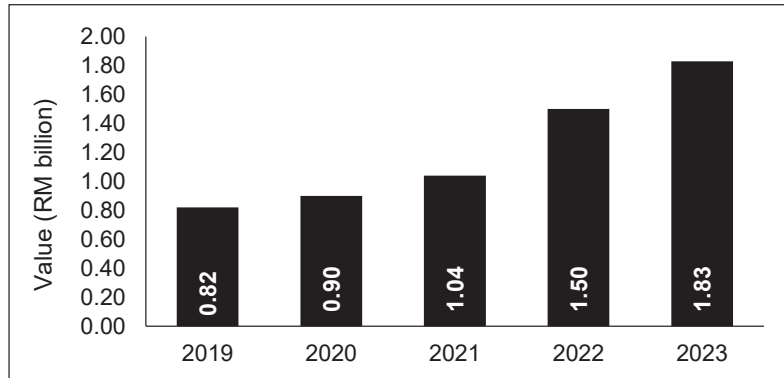
- **Raw materials production** - Carried out by processors and manufacturers that are involved in extracting, processing and/or manufacturing synthetic materials or soil materials such as polypropylene, polyester, polyethylene and polyvinyl chloride, concrete and clay. This segment also includes refineries and millers that produce natural biomass substrates such as palm fibre, coconut fibre and paddy straw, which are by-products from milling of oil palm, coconut and paddy;
- **Research and development** - Performed by geosynthetics and erosion control products manufacturers and original equipment manufacturers (“OEMs”) to improvise existing or introduce new geosynthetic technologies and products;
- **Geosynthetics and erosion control products manufacturing** – Geosynthetics and erosion control products manufacturers manufacture their own products in-house and sell it to geosynthetics and erosion control products suppliers for onward sale, or directly to contractors and subcontractors. OEMs are manufacturers appointed by product owners to manufacture geosynthetics and erosion control products according to the specifications provided by product owners;
- **Trading** – Geosynthetics and erosion control products suppliers purchase from manufacturers for onward sale to geotechnical engineering firms, contractors and subcontractors. These suppliers typically have the required technical expertise to market and trade the products; and
- **Design and installation** - Geotechnical engineering firms play an important role in the implementation of geotechnical solutions whereby they assess and analyse the soil properties, geological features and subsurface conditions to design geotechnical solutions that are tailored to the specific ground conditions and project requirements. Geotechnical engineering firms may have their own construction arm or may collaborate with contractors/subcontractors to carry out the installation of geosynthetics and erosion control products according to their engineering design.

The geotechnical solutions industry in Malaysia comprises industry players who are involved in the manufacturing of geosynthetics and erosion control products, and industry players who are involved in the implementation of geotechnical solutions which utilise these products. Fibromat Group is involved in both geosynthetics and erosion control products manufacturing and geotechnical solutions implementation.

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**Industry Performance, Size and Growth****Geotechnical solutions industry, 2019-2023**

Note:

- The industry size may also include figures of other geotechnical works which Fibromat Group may not provide such as blasting and rock removal work, earthworks, excavation, digging of conventional ditches, land recreation works and other earthmoving work services.

Sources: Department of Statistics Malaysia ("DOSM"), SMITH ZANDER

Civil engineering is a discipline that deals with the overall design, construction and maintenance of infrastructure such as roads, railways, bridges, tunnels, reservoirs, irrigation systems, sewer systems, waterways, dams and structural components of buildings. On the other hand, geotechnical engineering is a discipline within civil engineering that focuses on managing and addressing challenges related to the performance of soil, which are aimed at ensuring the stability and integrity of soil, and consequently the safety of infrastructure and properties built on it. Hence, the geotechnical solutions industry is part of civil engineering sub-sector.

The geotechnical solutions industry size in Malaysia, measured based on the value of work done<sup>1</sup>, grew from RM0.82 billion in 2019 to RM1.83 billion in 2023. Overall, the geotechnical solutions industry in Malaysia demonstrated a healthy growth from 2019 to 2023, registering a compound annual growth rate ("CAGR") of 22.22%. Moving forward, SMITH ZANDER estimates the geotechnical solutions industry size to increase at a CAGR of 19.42% to reach RM2.61 billion in 2025.

Moving forward, the continued growth of the industry is expected to be driven by the growth in infrastructure development, government budgets and initiatives on infrastructure construction for disaster prevention and environmental conservation, as well as urbanisation which drives the need for new infrastructure and infrastructure upgrades, in which further details are as set out in *Chapter 2 – Key demand drivers*.

**2 KEY DEMAND DRIVERS, RISKS AND CHALLENGES****Key Industry Drivers****► Infrastructure development drives growth in the geotechnical solutions industry**

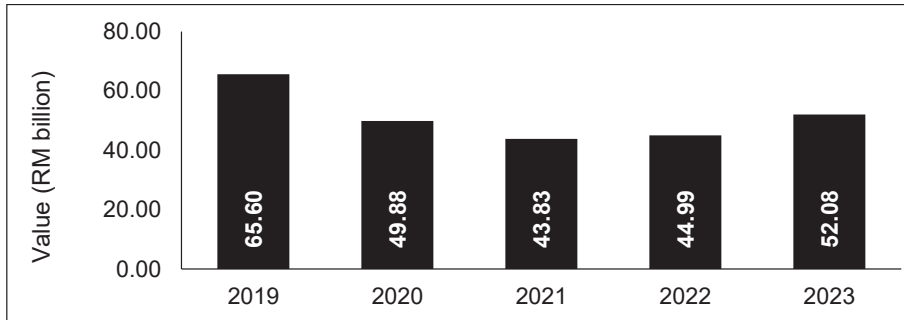
The geotechnical solutions industry is particularly impacted by infrastructure development as infrastructure construction activities require substantial use of geotechnical solutions. Infrastructure construction activities is represented by the civil engineering sub-sector as civil engineering works encompass construction activities for roads, railways, bridges, tunnels, reservoirs, irrigation systems, sewer systems, waterways, harbour and river works, pleasure ports (marinas), locks, dams and dykes, and dredging of waterways, amongst others. These activities generally require geotechnical solutions to manage and address challenges related to the performance of soil prior to construction in order to ensure the stability and integrity of soil, and consequently the safety of infrastructure built on it. As such, the growth of the civil engineering sub-sector will be the main driver for the geotechnical solutions industry.

<sup>1</sup> The measurement of value of work done is a methodology adopted by DOSM to measure the cost of a construction project undertaken by construction companies. As defined by DOSM, the value of work done includes new construction, major repairs, repairs, renovations and repairs, and current maintenance carried out during the reference period for the project owner or investor. Given that the cost of a construction project generally includes product costs and labour costs, it can be deduced that the value of work done covers the value of geotechnical solution products. However, the industry size relating to the trading of geotechnical products (excluding construction work done) is not publicly available.

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**Value of construction work done for the civil engineering sub-sector, 2019 – 2023**



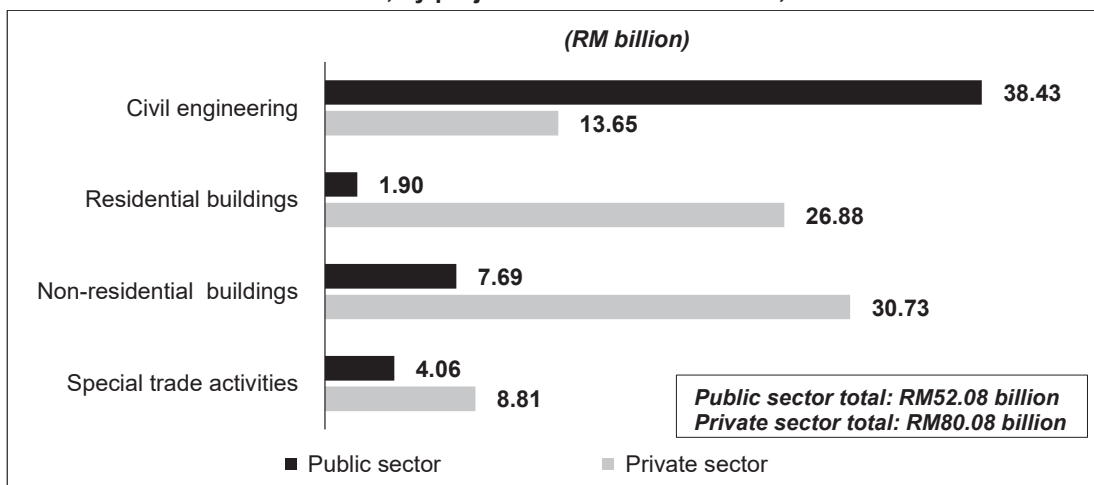
Source: DOSM

The civil engineering sub-sector, measured by value of construction work done declined from RM65.60 billion in 2019 to RM43.83 billion in 2021. The value of construction work done for 2020 and 2021 was impacted by the overall slowdown in construction activities following the outbreak of the COVID-19 pandemic and the prioritisation of funding for the healthcare sector in response to the COVID-19 pandemic, as well as financial relief to support individuals and businesses during the pandemic to drive economic recovery.

Further, the reprioritisation of certain mega infrastructure projects such as the cancellation of the Kuala Lumpur-Singapore High-Speed Rail and postponement of the mass rapid transit line 3 (MRT 3), which arose from political uncertainties and resulted in the subsequent re-evaluation of projects due to budget constraints, had also affected the value of construction work done recorded in 2020 and 2021. Notwithstanding that, the construction work done for the civil engineering sub-sector recovered by 2.65% year-on-year (“YOY”) in 2022 and 15.76% YOY in 2023 (a CAGR of 9.01% from 2021 to 2023), as construction activities normalised and was backed by continued spending by the Government of Malaysia (“Government”) on existing infrastructure projects such as continuation of the construction of Phase 1 Sabah Pan Borneo Highway project, Phase 1 Sarawak-Sabah Link Road project and Johor Bahru-Singapore Rapid Transit System (RTS) Link project, as well as new infrastructure project such as Phase 1 expansion of the North-South Expressway project from Yong Peng Utara to Senai Utara. SMITH ZANDER estimates the construction work done for the civil engineering sub-sector to grow by 3.41% YOY in 2024<sup>2</sup>.

The growth of the civil engineering sub-sector is underpinned by funding from the public sector (i.e. Government and public corporation) as infrastructure is constructed and upgraded to drive economic development of the country as well as for the well-being of the nation. This is evidenced by the high contribution from the public sector in the civil engineering sub-sector in terms of value of construction work done.

**Value of construction work done, by project owner and sub-sector, 2023**



Sources: DOSM, SMITH ZANDER

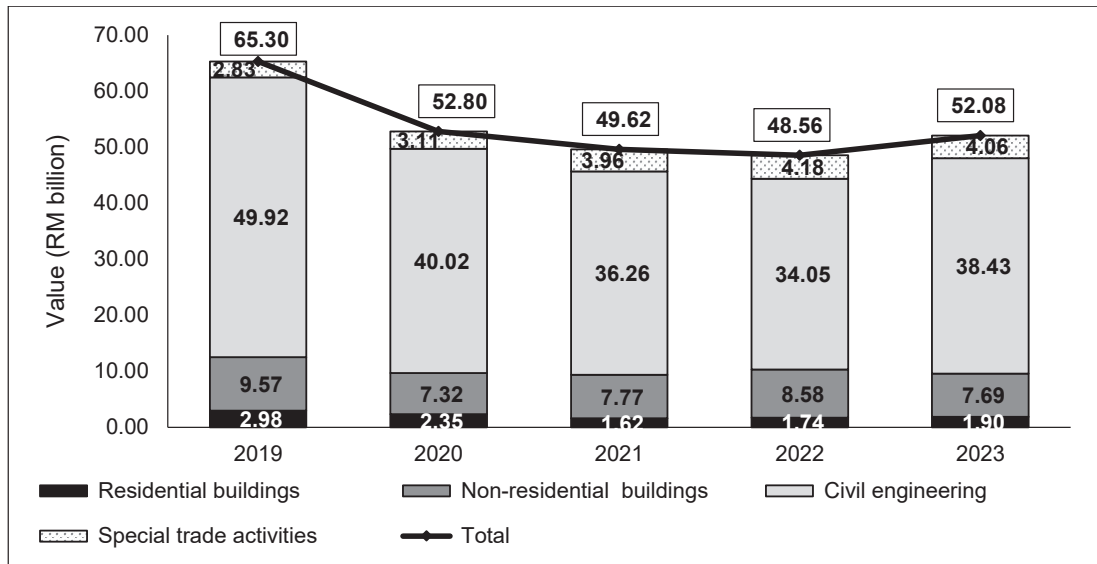
<sup>2</sup> The basis of estimation is based on the computation of average percentage share of value of construction work done to national GDP, multiplied with the forecasted national GDP for 2024.

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In 2023, the total value of construction work done for the civil engineering sub-sector was recorded at RM52.08 billion. Out of the RM52.08 billion, RM38.43 billion, or 73.79%, was value of construction work done for the civil engineering sub-sector by the public sector through government spending. This is in contrast to the private sector whereby the total value of work done for the civil engineering sub-sector contributed RM13.65 billion, or 17.05%.

**Value of construction work done for projects owned by the public sector, by sub-sector, 2019 – 2023**



Sources: DOSM, SMITH ZANDER

Further, between 2019 and 2023, the civil engineering sub-sector remained the highest contributor to the value of construction work done recorded for projects owned by the public sector whereby it contributed between 70.12% to 76.45% of the total value of construction work done for projects owned by the public sector. This demonstrates that public spending for construction activities was primarily allocated to the civil engineering sub-sector to drive the country's infrastructure development.

Going forward, the infrastructure construction activities of the country will continue to be driven by various infrastructure projects announced under Budget 2024 such as the following:

- construction of Phase 1B Sabah Pan Borneo Highway project worth RM15.70 billion;
- construction of Phase 2 Sarawak-Sabah Link Road project worth RM7.40 billion;
- maintenance of state roads and infrastructure including damaged drainage, slopes and bridges worth RM5.40 billion;
- construction and upgrade of roads in villages and rural areas worth RM1.63 billion;
- Phase 2 expansion of the North-South Expressway from Sedenak to Simpang Renggam worth RM931 million; and
- construction of the Penang to Seberang Perai Light Rail Transit ("LRT") worth RM10 billion.

Consequently, these infrastructure projects are expected to drive the demand for geotechnical solutions in the upcoming years. Hence, the continued public spending by the Government on infrastructure projects to support national development and progress will drive the growth of the civil engineering sub-sector which, in turn, is expected to drive the demand for geotechnical solutions.

► **Government budgets and initiatives on infrastructure construction for disaster prevention and environmental conservation will generate demand for geotechnical solutions**

The growth of the geotechnical solutions industry in Malaysia is tied to the growth of the construction industry and as such, government budgets and initiatives relating to infrastructure construction will also benefit the geotechnical solutions industry in Malaysia. In addition to the infrastructure projects announced to drive economic activities as mentioned in the key demand driver above, the Government also announced infrastructure projects that are aimed at disaster prevention and environmental



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conservation which will also generate demand for geotechnical solutions. In recent years, the occurrence of landslides has become more frequent in Malaysia due to soil erosion caused by heavy and continuous rainfall. Examples of major landslides that have occurred since 2020 are as follows:

Date	Location
March 2020	• Mount Jerai, Kedah
May 2020	• Taman Kelab Ukay, Bukit Antarabangsa, Selangor
January 2021	• Old Bentong-Raub road, Pahang
September 2021	• Kemesah Heights, Ampang, Selangor
December 2021	• Simpang Pulai-Blue Valley, Cameron Highlands, Pahang
March 2022	• Taman Bukit Permai, Ampang, Selangor
May 2022	• Kampung Janda Baik, Bentong, Pahang • Taman Sri Perkasa, Ipoh
June 2022	• Jalan Tun Dr Ismail, Taman Bukit Sentosa, Seremban, Negeri Sembilan
November 2022	• Jalan Mantin Batu 8, Negeri Sembilan
December 2022	• Father's Organic Farm, Batang Kali, Selangor (near Genting Highlands)
June 2023	• Jalan Simpang Pulai-Blue Valley, Perak
October 2023	• Kampung Sungai Ruil Hill, Cameron Highlands, Pahang
November 2023	• Rumah Imban, Ulu Ranan, Sibul, Sarawak
December 2023	• Taman Wawasan Puchong, Selangor
January 2024	• Jalan SP2, Bandar Saujana Putra in Kuala Langat, Selangor • Taman Yong, Selirik, Kapit, Sarawak • Kampung Raja, Blue Valley, Pahang
March 2024	• Jalan Sungai Kelambu, Banting, Selangor
April 2024	• Sungai Merurun, Pakan, Sarawak • Jalan Amut, Pakan, Sarawak
June 2024	• Mount Kinabalu at Ulu Sungai Mesilou area, Kundasang, Sabah
July 2024	• Madsiang-Kipouvo Road at Penampang, Sabah
August 2024	• Taman Bunga Raya, Setapak, Kuala Lumpur

Source: Various sources

Landslides result in fatalities or injuries, as well as economic costs due to the destruction of buildings and infrastructure. As such, the awareness for geotechnical solutions is growing to ensure the safety of buildings and infrastructure. Under Budget 2024, the Government announced the following projects, aimed at disaster prevention and environmental conservation, which are expected to drive the demand for geotechnical solutions:

- Allocation of RM11.80 billion for 33 high priority Flood Mitigation Projects which comprise construction works such as widening and deepening of riverbed, strengthening of riverbanks, upgrading of drainage systems, as well as construction of flood prevention structures such as river embankment, tires, flood retaining walls, flood bunds or river diversions, sluice gates, flood storage dams and flood attenuation ponds to prevent flooding and/or soil erosion;
- Allocation of RM563 million to maintain and repair slopes nationwide for landslide prevention;
- Allocation of RM70 million for flood preparedness for local authorities whereby RM20 million will be used to upgrade drainage and repair damaged drains and RM50 million will be used to repair flood retention ponds; and
- Allocation of RM185 million for river upgrading, cleaning and treatment programme to conserve rivers and reduce flood risks for Sungai Tuaran Conservation Project in Sabah and River Conservation Projects in Federal Territory of Kuala Lumpur.

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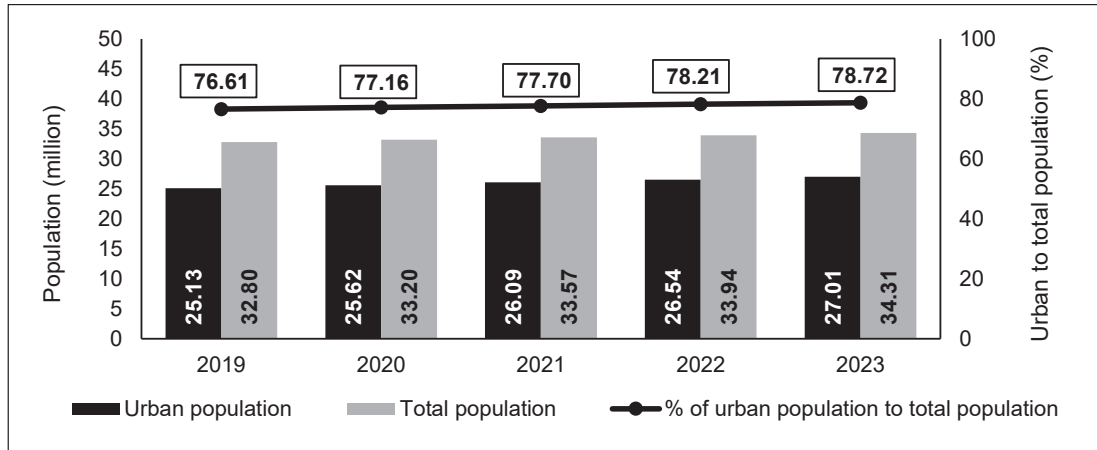
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► **Urbanisation drives the need for new infrastructure and infrastructure upgrades**

Rural to urban migration in Malaysia continues to increase due to the availability of education and employment opportunities, and people’s desire to seek higher standards of living in cities and other urban areas.

**Malaysian urban and total population, 2019 – 2023**



Sources: World Bank, SMITH ZANDER

In 2023, urban population accounted for an estimated 78.72% of the total population in Malaysia and has been steadily increasing from 76.61% in 2019. As individuals migrate to urban areas, urban population expands, thus driving increased economic activities. Consequently, it is expected to result in a concurrent increase in demand for residential, commercial and industrial properties due to the increase in the average income of the population as well as business activities.

As these construction sub-segments (i.e. residential, commercial and industrial) develop, the infrastructure and social amenities supporting these developments must be likewise built or improved. This, in turn, drives the demand for geotechnical solutions to support land development activities to cater for the construction of these properties.

**Industry Risks and Challenges**

► **Political uncertainties or changes in government policies may adversely affect public spending on major infrastructure projects, which may affect the demand for geotechnical solutions**

Political uncertainties or changes in government policies may adversely affect public spending whereby the government may review major infrastructure projects in terms of benefits and cost-effectiveness for the nation as a whole. Upon studying the feasibility of major infrastructure projects, the projects may be cancelled if they are deemed not viable, or delayed, which affects opportunities for construction and geotechnical solution providers. For instance, changes in government policies in 2018, due to high national debt, led to the cancellation or postponement of several mega infrastructure projects. However, some of these mega infrastructure projects were later revived by further policy changes.

The growth in the geotechnical solutions industry is highly correlated to the growth of the civil engineering sub-sector, which is dependent on spending from the public sector. Hence, any political uncertainties or changes in government policies which results in the reduction of government spending on infrastructure development may adversely affect the demand for geotechnical solutions.

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**3 COMPETITIVE LANDSCAPE OF THE GEOTECHNICAL SOLUTIONS INDUSTRY IN MALAYSIA****Overview**

The geotechnical solutions industry in Malaysia comprises local-based and foreign-based industry players that are solely involved in the provision of geotechnical solutions, and industry players that are involved in the provision of geotechnical solutions as well as other construction related activities such as civil engineering and infrastructure construction. Some of these industry players may also be involved in the manufacturing of certain geosynthetics and erosion control products whereby the products are applied in their projects, or they may sell it to other geotechnical engineering firms, contractors, subcontractors for project application, or to geosynthetics and erosion control products suppliers (i.e. trading companies). Further, due to the nature of the industry, there are instances where general construction contractors will secure projects from project owners and subcontract the geotechnical works to subcontractors who have the required technical capabilities to carry out design and installation works.

The barriers to entry to the geotechnical solutions industry include the ability of a provider to obtain a Construction Industry Development Board Malaysia (CIDB) license, hire experienced employees with relevant technical expertise, compete with existing industry players who have in-depth industry knowledge and vast experience, as well as have strong financial standing to sustain upfront costs required to commence installation works and to sustain operational costs due to the industry practise of receiving payments on credit terms, on work done basis.

**Key Industry Players**

Fibromat Group is principally involved in the provision of geotechnical solutions for erosion control, ground improvement, as well as sediment control, filtration and containment lining. Hence, the basis for selection of key industry players is as set out below:

- Industry players who are involved in the provision of geotechnical solutions related to erosion control, ground improvement, and/or sediment control, filtration and containment lining are included as competitors to Fibromat Group. The identified industry players may also be involved in the manufacturing of geosynthetics and erosion control products; and
- General construction contractors who secure projects from project owners and subcontract the geotechnical works to subcontractors, as well as industry players who are solely involved in the trading of geosynthetics and erosion control products are excluded as competitors to Fibromat Group on the basis that they do not have similar technical capabilities as Fibromat Group.

The following sets out the latest available financial information of the selected key industry players in Malaysia:

Company name	Principal business activities	Latest financial year	Revenue (RM million)	Gross profit/ (loss) (RM million)	Gross profit/ (loss) margin (%)	Net profit/ (loss) (RM million)	Net profit/ (loss) margin (%)
Solmax Geosynthetics Asia Sdn Bhd <sup>(1)</sup> (formerly known as TenCate Geosynthetics Asia Sdn Bhd)	Provision of geotechnical solutions, as well as manufacturing and supply of geosynthetics and industrial technical textiles	31 December 2023	189.09	78.95	41.75	15.12	8.00
Maccaferri (Malaysia) Sdn Bhd <sup>(2)</sup>	Provision of geotechnical solutions, as well as manufacturing and supply of geosynthetics, erosion control products and steel wire meshes	31 December 2023	105.98	29.16	27.51	5.90	5.57
Fibromat Group	Provision of design and installation of geotechnical solutions, manufacturing and sale of in-house products, and trading of geosynthetics and erosion control products	31 December 2023	68.30	17.14	25.10	8.49	12.43

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Company name	Principal business activities	Latest financial year	Revenue (RM million)	Gross profit/ (loss) (RM million)	Gross profit/ (loss) margin (%)	Net profit/ (loss) (RM million)	Net profit/ (loss) margin (%)
Wil-Key International Sdn Bhd <sup>(3)</sup>	Supply of geosynthetics and erosion control products, provides installation of geomembranes, and manufacturing of geomembrane seaming and seam testing equipment	31 December 2023	55.52	12.21	21.99	4.62	8.32
NAUE Asia Sdn Bhd <sup>(4)</sup>	Provision of geotechnical solutions, as well as manufacturing and supply of geosynthetics and erosion control products	31 December 2023	38.17	15.52	40.66	0.28	0.73
CeTeau Malaysia Sdn Bhd <sup>(5)</sup>	Provision of geotechnical solutions, as well as manufacturing and supply of geosynthetics and erosion control products. The company is also involved in the provision of biogas solutions	31 December 2022	35.05	6.19	17.66	0.75	2.14
Huls Engineering Sdn Bhd <sup>(6)</sup>	Provision of geotechnical solutions and waterproofing solutions	31 December 2023	26.99	9.84	36.46	0.08	0.30
Reinforced Earth Malaysia Sdn Bhd <sup>(7)</sup>	Provision of geotechnical solutions, as well as solutions for civil engineering and infrastructure construction	31 December 2023	18.94	4.39	23.18	0.11	0.58
Geopakar Engineering Sdn Bhd <sup>(8)</sup>	Provision of geotechnical solutions, as well as other services such as guniting, soil nailing, rock drilling and grouting works	31 December 2023	8.96	0.80	8.93	(1.65)	(18.42)
GTEK Resources Sdn Bhd <sup>(9)</sup>	Provision of geotechnical solutions	31 July 2023	6.10	1.37	22.46	(0.02)	(0.33)

**Note:**

- The key identified geotechnical solutions industry players include all industry players that were identified by SMITH ZANDER based on sources available, such as the internet, published documents and industry directories. However, there may be companies that have no online and/or published media presence, or are operating with minimal public advertisement, and hence SMITH ZANDER is unable to state conclusively that the list of industry players is exhaustive. Further, in instances where the identified industry players are private exempt companies, they are also excluded from the table above.

(1) Solmax Geosynthetics Asia Sdn Bhd is a subsidiary of Groupe Solmax Inc., a company incorporated in Canada. Groupe Solmax Inc. is a multinational company with offices and market presence globally.

(2) Maccaferri (Malaysia) Sdn Bhd is a subsidiary of Officine Maccaferri S.p.A., a company incorporated in Italy. Officine Maccaferri S.p.A. is a multinational company with offices and market presence globally.

(3) The principal markets of Wil-Key International Sdn Bhd are Asia, Russia and Australia.

(4) NAUE Asia Sdn Bhd is a subsidiary of Naue GmbH & Co. KG, a company incorporated in Germany. Naue GmbH & Co. KG is a multinational company with offices and market presence in Europe, the United States and Malaysia.

(5) CeTeau Malaysia Sdn Bhd is a subsidiary of CeTeau B.V., a company incorporated in the Netherlands. CeTeau B.V. is a multinational company with offices and market presence in North America, Europe, Asia and Oceania.

(6) The principal market of Huls Engineering Sdn Bhd is Malaysia.

(7) Reinforced Earth Malaysia Sdn Bhd is a subsidiary of Soletanche Freyssinet SAS, a company incorporated in France. Soletanche Freyssinet is a multinational company with offices and market presence globally.

(8) The principal market of Geopakar Engineering Sdn Bhd is Malaysia.

(9) The principal market of GTEK Resources Sdn Bhd is Malaysia.

Sources: Various company websites, SSM, Fibromat Group, SMITH ZANDER

**8. IMR REPORT (Cont'd)**

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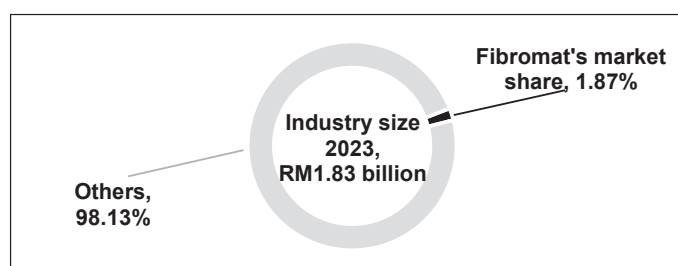
There are also listed companies in Malaysia that are primarily foundation and civil engineering companies that also provide geotechnical solutions to complement their offerings. However, the range and scope of geotechnical solutions provided by these listed companies are not identical to Fibromat Group. Some examples of such listed companies are as follows:

Listed company name	Principal business activities	Services similar to Fibromat Group
Econpile Holdings Berhad	<ul style="list-style-type: none"> <li>- Provides foundation and geotechnical works such as cast-in-situ bored piles, driven and jack-in piles, micropile, earth retaining system, lateral support system, slope protection and stabilisation, and ground improvement works</li> <li>- Provides civil engineering works such as earthwork and basement excavation, and infrastructure works</li> <li>- Provides structure works such as pile cap, basement slabs, top-down construction, temporary steel platform and staging, and bridges</li> </ul>	Slope protection and stabilisation, and ground improvement works
TCS Group Holdings Berhad	<ul style="list-style-type: none"> <li>- Provides geotechnical works such as soil investigation, soil and ground improvement, slope stabilisation and protection, ground anchor and steel strutting</li> <li>- Provides piling works such as bored piles, driven and jack-in piles, and micropile</li> <li>- Provides basement structure works such as excavation of basement, pile cap and basement beam/slab, and top down construction</li> <li>- Provides earth retaining structure works such as contiguous bored pile, secant pile wall, soldier pile walls, diaphragm walls and sheet piles</li> </ul>	Soil and ground improvement works, slope stabilisation and protection works
Pintaras Jaya Berhad	<ul style="list-style-type: none"> <li>- Provides geotechnical works such as ground improvement and earth works</li> <li>- Provides piling works such as cast-in-place bored piles, driven piles, jacked-in piles, micropiles and hand-dug caissons</li> <li>- Provides earth retaining systems works such as diaphragm walls, contiguous bored pile walls, steel sheet piled walls, soldier pile and timber lagging walls, reinforced soil retaining walls, precast segmental earth retaining walls, ground anchors and steel strutting, soil nailing and guniting</li> <li>- Provides substructure and basement works such as basement wall, basement slabs, ground beams, and pile caps</li> <li>- Provides civil engineering and building works</li> </ul>	Ground improvement works
Vestland Berhad	<ul style="list-style-type: none"> <li>- Provides geotechnical works such as slope stabilisation works</li> <li>- Provides earthworks such as site clearance, excavation, backfilling, compacting earth and rock hacking works</li> <li>- Provides design and build construction works</li> </ul>	Slope stabilisation works
MGB Berhad	<ul style="list-style-type: none"> <li>- Provides foundation and geotechnical works such as bored piles, retaining walls and structures, and various type of soil improvement works</li> <li>- Provides design and build construction works for high rise and landed properties, townships, mixed developments, institutional and infrastructure development</li> <li>- Involvement in property development activities and manufacturing of industrialised building system (IBS)</li> </ul>	Soil improvement works

Sources: Various company websites, SMITH ZANDER

**Market Share**

In 2023, the geotechnical solutions industry size in Malaysia, was recorded at RM1.83 billion. Fibromat Group captured a market share of 1.87% in 2023, based on its revenue contribution of RM34.19 million (excluding the manufacturing and trading segments of the Group) for the FYE 31 December 2023.



Sources: DOSM, Fibromat Group, SMITH ZANDER