ARROWHEAD
BUSINESS AND INVESTMENT DECISIONS

Due Diligence and Valuation Report

Arrowhead code:	65-01-05
Coverage initiated:	29-Jun-2022
This document:	16-Nov-2023
Fair Value Bracket:	ZAR 29.30 to ZAR 35.81
Share Price (15-Nov-2023):	ZAR 6.14

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JSE

Company:	Aveng Group Limited
Ticker:	JSE: AEG
Headquarters:	Johannesburg, South Africa
Chairman:	Philip Hourquebie
CEO:	Sean Flanagan
Website:	www.aveng.co.za

Market Data

52-Week Range	ZAR 5.05 – ZAR 16.89
90-Day Average Daily Volume:	103,442
Market Cap. on date:	ZAR 0.76 billion

Financial Forecast (in ZAR mn) (FY Ending – Jun)

ZAR	'24P	'25P	'26P	'27P	'28P
NI (mn)	147	349	566	775	1,021
EPS (ZAR)	1.2	2.8	4.5	6.1	8.1

Company Overview

Aveng Limited ("Aveng" or "the Group") is a diversified business group providing infrastructure development and resources and contract mining solutions, through its subsidiaries – McConnell Dowell and Moolmans. The Group is headquartered in South Africa and its projects are primarily in Australasia, South-East Asia, and Africa.

Aveng completed its long-term plan to dispose of its non-core assets in FY'23 and has further de-risked its Balance sheet from the disposal proceeds of its non-core assets.

Key Highlights

1. The Construction and Engineering (Australasia and Asia) business division and the Mining business division together accounted for almost the entire Revenue of the Group in FY'23. These two businesses are undertaken by the Group entities McConnell Dowell and Moolmans, respectively.
2. McConnell Dowell's projects are spread across Transport, Building, and Water & Wastewater segments. These segments account for 45%, 18% and 21% of the total work in hand respectively, as of June 30, 2023.
3. Moolmans provides mining support services across a diverse range of commodities to various multinational clients with minimal credit risk. It has a diversified project portfolio with respect to geography and clients.
4. Until 2018, Aveng had several business units providing manufacturing, construction & engineering, and steel beneficiation services across several countries. This expanse led to inefficiencies and the Group suffered losses from FY'14 to FY'20. However, in 2018, the Group implemented a comprehensive plan to deleverage its balance sheet and return to profitability by narrowing its focus to key operating units and disposing of all unprofitable businesses. Pursuant to this strategy, the Group completed the disposal of Trident Steel for ZAR 1.2 billion on April 28, 2023, and used the proceeds to completely settle the South African legacy debt of ZAR 478 million and the Trident Steel short-term trade finance facility of ZAR 450 million.

Key Strengths

Aveng has been in business for more than 140 years and has built a reputable position in the Construction industry. The Group is showing early signs of emerging from the significant challenges that it has faced in recent years due to internal factors and the overall economic environment. Aveng was profitable in FY'21 after seven years thanks to the restructuring plan laid out in 2018. The Group has disposed of its unprofitable units and reduced debt on its balance sheet. As of June 30, 2023, the Group has received ZAR 2.4 billion from the disposal of its non-core assets.

Key Risks

Aveng's business model is primarily contract-based where terms, such as the scope of work, payments, and duration of engagement, are fixed before the commencement of the projects. McConnell Dowell has included the foreseeable increase in costs in the contract estimates since June 30, 2022. Renegotiations of the existing contracts might lead to unexpected delays and closure of some of the contracts, affecting the overall profitability of the Group.

Valuation & Assumptions

Based on its due diligence and valuation estimates, Arrowhead believes that Aveng's fair share value lies in the ZAR 29.30 to ZAR 35.81 bracket, which has been calculated using a blended valuation method: with 80% weighting to a DCF method and 20% weighting to a Comparable Companies Valuation method. Our DCF model suggests a fair value of ZAR 30.89, while a relative valuation provides a fair value of ZAR 39.21.

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Investment Thesis

Arrowhead is updating equity research coverage of Aveng Limited with the following investment highlights:

Optimistic Future Outlook as the Group Achieves Profitability after Seven Years in FY'21

Aveng has been in existence for more than 140 years and has built a reputable position in the Construction industry through McConnell Dowell which was acquired by the Group in 2003. McConnell Dowell is a 60-year-old entity providing construction and engineering services and has delivered several complex projects across various disciplines. McConnell Dowell had work in hand amounting to AUD 3.5 billion as of June 30, 2023. The Group is showing early signs of emerging from the significant challenges that it faced in recent years due to internal factors and the overall economic environment. It was profitable in FY'21 after seven years of losses due to the restructuring plan laid out in 2018. The Group is now banking on the growth from McConnell Dowell and Moolmans as these entities have the highest potential for generating sustainable profits over the long run.

Restructuring Plan Focused on Balance Sheet Optimization and Profitability

The Group initiated a restructuring plan in 2018 to dispose of the unprofitable units and reduce debt on its balance sheet. From FY'18 to FY'23, the Group was able to sell non-core assets worth approximately ZAR 2.4 billion to pay off and retire its outstanding obligations and convert some part of the convertible debt to equity. To achieve profitability and focus on its potentially viable and profitable business units, the Group will be focusing exclusively on McConnell Dowell and Moolmans and selling all the other entities. We expect this to help the Group improve its resource utilization and operational efficiency, resulting in higher profits over the next few years. Divesting underperforming businesses is also likely to allow the Group to narrow its focus on its areas of strength and better leverage them for higher revenue growth and profitability. The Group announced on October 4, 2022, that it has entered an agreement to sell Trident Steel to a consortium of local and USA private capital, including Ambassador Enterprises LLC, Joseph Investments Proprietary Limited, Arbor Capital Investments Proprietary Limited, and Trident Steel management. The Group completed the disposal of Trident Steel for ZAR 1.2 billion on April 28, 2023, and partly used the proceeds to fully settle the South African legacy debt of ZAR 478 million and the Trident Steel short-term trade finance facility of ZAR 450 million. Prior to this, the Group had also completed the disposals of Duraset, Infraset Pietermaritzburg, Swaziland, Brakpan & De Aar, and REHM. The Group also disposed of several Aveng Infraset factories and the Aveng Automation and Control Solutions business under its restructuring plan.

Diversified Project and Client Types to Minimize Overdependence

The Group diversifies its projects across client industries, clients, and disciplines to avoid overdependence on a few of these. Most of the McConnell Dowell's projects are spread across Transport, Building, and Water & Wastewater segments, with these segments accounting for 45%, 18% and 21% of the total work in hand respectively as of June 30, 2023. Along with targeting diversification, 83% of McConnell Dowell projects are from government agencies, which reduces credit and counterparty risks. Similarly, Moolmans also has a diversified project portfolio with respect to geography and clients. The company provides mining support services across a diverse range of commodities to various multinational clients with minimal credit risk.

Macro-Economic Headwinds Could Decelerate Revival in the Medium Term

Although the Australian and South African economies have recovered from the Covid-19 pandemic, the uncertain macroeconomic environment due to an increase in interest rates and Russia's continuing invasion of Ukraine could become headwinds for the Group. Supply chain disruptions, inflationary pressures, and human resource capacity constraints in the Engineering and Construction sector are some of the medium-term challenges that the Group might have to navigate through. McConnell Dowell's project Batangas LNG terminal in Philippines faced challenges during its initial days in 2020 because of Covid-related supply chain disruptions and restrictions on the movement of personnel and resources. As a result, the company had to initiate the project design remotely. The supply chain disruptions were compounded by the war in Ukraine.

McConnell Dowell negotiated with the client (FGEN LNG Corporation) to get some time relief on the Batangas LNG terminal project. However, the client did not provide any time relief and applied for maximum liquidated damages. Therefore, the company reported expenses attributed to Batangas LNG project of ZAR 1.2 billion in FY'23. McConnell Dowell has entered into a separate rates-based services agreement with the client to achieve full commissioning of the Batangas LNG project. To prevent such instances from repeating in the future, the Group conducted a review of the BLNG project and all the current projects of McConnell Dowell. The review of the existing projects has led to the creation and implementation of improved operational standards and governance procedures for all the McConnell Dowell's projects and tenders.

McConnell Dowell has implemented a turnaround plan for its Southeast Asia business division after Covid-19, which includes the appointment of a new MD to further strengthen its leadership team. In addition to these macroeconomic factors, the Group is facing challenges in its key geographies of operation including riots and civil unrest in KZN, shutdowns and strikes in steel mills, and floods and unseasonal rainfall in Northern Cape. Although most of these are infrequent or one-off challenges, their recurrence is possible and could impact the Group's performance going forward.

The businesses of the key operating entities of the Group are highly correlated with the overall macroeconomic environment in the countries. Along with the fears of the pandemic, the current macroeconomic environment in the countries is not very supportive of the growth of mining and construction businesses. Although the Government of Australia has budgeted AUD 15.5 billion for the state infrastructure projects, other factors including inflation and supply chain disruptions due to the ongoing invasion might have a prolonged impact on the Group's business. Costs are generally increasing in the Construction industry because of inflation. McConnell Dowell has deployed several strategies at the tender and the project delivery stages to manage these cost increases. The company is facing cost inflation the most in projects awarded to it before FY'22.

Company Presentation

Aveng Limited ("Aveng" or "the Group") is a diversified business group providing infrastructure development and resources and contract mining solutions. The Group's three primary subsidiaries are Aveng Africa Proprietary Limited, Aveng Australia Holdings Proprietary Limited, and Aveng Moolmans Holdings. The Group is headquartered in South Africa and its projects are primarily in Australia, South-East Asia, and Africa. Aveng has 4,861 employees and is listed on the Johannesburg Stock Exchange under the ticker (JSE: AEG). The operations of Aveng's various group companies are summarized below:

Business Units	Geography of Operations	Core Services
McConnell Dowell	Australia, New Zealand and Pacific Islands, and Southeast Asia.	Construction and Engineering
Moolmans	Africa	Contract Mining

Restructuring Plan: In 2018, the Group implemented an in-depth plan to focus on improving its profitability and capital structure by selling its non-core and unprofitable business units. These initiatives have allowed the Group to significantly reduce debt, achieve profitability, improve liquidity, and grow its work in hand to ZAR 52.2 billion as of June 30, 2023. The Group raised ZAR 592 million through equity and was able to reduce its debt by 42% in FY'21 and further to ZAR 353 million as of December 31, 2022. In FY'23, McConnell Dowell raised term debt of ZAR 290 million to partially fund the BLNG project guarantee and Moolmans entered into an asset-backed financing arrangement of ZAR 704 million. The selling of non-core assets resulted in surplus cash for the Group, helping it to pay and retire some part of its debt obligations earlier than the stated maturity.

On October 4, 2022, the Group announced the disposal of Trident Steel, which it classified as discontinued operations in 2019. However, due to the impact of Covid-19 and weak market conditions, the sale of Trident Steel was not completed, and the Group restated its statements to include Trident Steel as a part of continued operations. The Group completed the disposal of Trident Steel for ZAR 1.2 billion on April 28, 2023. The proceeds from the disposal of Trident Steel were partially used to settle the South African legacy debt of ZAR 478 million (which was at ZAR 3.3 billion at its all-time high and now completely extinguished) and the Trident Steel short-term trade finance facility of ZAR 450 million.

Key Operating Entities: Aveng reports its revenue under four segments including Construction and Engineering (Australasia and Asia), Mining, Construction and Engineering (South Africa and the rest of Africa), Manufacturing and Processing, and Other. Going forward, Aveng will exclusively focus on its Construction and Engineering (Australasia and Asia) and Mining business divisions. The Group completed its long-term plan to dispose of its non-core assets in FY'23. The Construction and Engineering (Australasia and Asia), and Mining business divisions accounted for approximately 99.9% of the Group's Total Revenue in FY'23. These two businesses are undertaken by McConnell Dowell and Moolmans, respectively. A brief description of these two entities and their services is as follows:

a) McConnell Dowell: McConnell Dowell is a tier-two contractor providing construction and engineering services. McConnell Dowell has been in business for over 60 years and has developed expertise in various types of projects including civil, electrical, fabrication, marine, mechanical, pipelines, rail, and tunnel and underground construction. McConnell Dowell through its subsidiary Built Environs, provides construction services specializing in buildings for infrastructure, defense, commercial purposes, education, and health and aged care.

See important disclosures on page 49 of this report.

To reduce over dependence, the company tries to diversify its contracts both with respect to contract type and client sector, enter collaborative contracts, and offer services with specialist capabilities to negotiate better terms. McConnel Dowell had ZAR 44.2 billion of work in hand as of June 30, 2023. The scope of services offered by the company includes:

i. **Transport Solutions:** This includes the construction and refurbishment of roads, bridges, airports, and trains & tramways. The company has decades of experience working on or near live roads, railways, and airports, and operating as an approved Rolling Stock Operator across Australia. McConnell Dowell also has a rail plant, a modern plant yard, and workshop for the maintenance of its fleet.

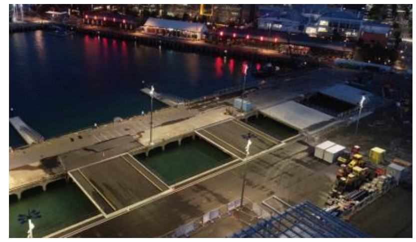
ii. **Water and Wastewater Solutions:** This includes capture, storage, treatment, distribution, and disposal of drinking, waste, and stormwater. The company has delivered several desalination plants, dams, pipeline networks, and has ensured water security for urban and rural communities. The company's in-house specialty skills and plant enabled the execution of horizontal directional drilling, micro-tunneling and, Direct Pipe has helped it deliver many complex trenchless solutions to its customers.

iii. **Resource Solutions:** These solutions include the construction of pipelines, marine terminals, process plants, storage terminals, materials handling equipment, rail infrastructure, as well as underground construction. The company offers these services to customers in the Mining, Petrochemical, and Oil & Gas sectors. Most of the resource projects the company has undertaken until now are in Australia.

iv. **Marine and Coastal Solutions:** The company has completed over 330 marine projects for wharves, jetties, ocean outfalls, breakwaters, causeways, and submarine pipelines. McConnell Dowell has a strong performance history of working in busy operational port environments and providing a safe working environment for port users. The company claims that its systems and procedures for marine project delivery are proven in the protection of its people and the environment.

v. **Energy Solutions:** This includes civil, electrical, mechanical, pipelines, and tunnelling works for various types of power generation projects including wind, solar, geothermal, and hydro. The company has delivered several projects in Australia, New Zealand, and other countries.

vi. **Building Solutions:** The company provides services including the construction of complex buildings like hospitals, aged care facilities, and high-performance sports facilities. These services are provided through Built Environs company under McConnell Dowell, which is a full-service construction company providing design management, through to construction and fit-out.



b) **Moolmans:** Moolmans is a 100% owned subsidiary of Aveng offering contract mining services across Africa. The company mines a wide range of commodities including gold, silver, coal, manganese, iron ore, and nickel. With over 60 years of experience, the company has developed a competitive position in the contract mining space in Africa through strong customer relationships, extensive experience in remote and difficult locations, and delivery of complex projects within budgeted timelines. The company is accredited for an Integrated Management System which consists of ISO 14001:2015, ISO 9001:2015, and OSHAS 18001.

Moolmans was merged with Aveng Shafts & Underground in 2012 which together came to be known as Aveng Mining to realize the synergies between their operations and client base. After Aveng planned for the restructure in 2018, the company was renamed Moolmans. The integration of the operating groups helped the company deliver a range of specialized services across the mining value chain by combing their strengths to scale their capabilities. The company has planned to invest in heavy mining equipment to improve productivity and enable it to benefit from high commodity prices. The following table shows the current fleet capacity of the company:

Fleet Complement				
Excavators / Face Shovels	Dump Trucks	Drill Rigs	Support Equipment	Underground Equipment

In FY’18, the company incurred significant losses due to three underperforming contracts and a significant surge in costs attributable to the fleet which was recommissioned after a long time. To safeguard itself from such losses, the company renegotiated several existing contracts and exited one contract. Moolmans incurred losses on its initial contract with Tshipi é Ntle which was terminated in FY’23. After prolonged negotiations, the company entered into a new five-year contract with Tshipi é Ntle which is valued at ZAR 7 billion. The new contract has improved terms, and the company has committed to an investment of approximately ZAR 900 million for new equipment, out of which ZAR 613 million of equipment was purchased in FY’23. The company’s work in hand increased from ZAR 3.1 billion in June 2022 to ZAR 8.0 billion in June 2023. Along with a focus on getting lasting contracts in the future, the company has laid out a comprehensive strategy – Vision 25, which it believes will position the business as a leading international mining contractor. Moolmans provides the following services:

i. **Open Cut Mining:** The company has over 40 years of experience in both hard and soft rock environments, mining over 20 million tonnes of material each month. The company offers services from short-term waste mining and bulk earthmoving to a complete and long-term mining solution. Moolmans also provides ancillary services such as mine planning, surveying, production scheduling, and grade control services along with drilling, blasting, loading, and hauling. The company has experience in operating in remote and challenging locations with extensive human and equipment resources.

Company Milestones

Year	Event
1880	• Founded as Anglovaal Engineering
1999	• Listed on Johannesburg Stock Exchange under the ticker "AEG" • Acquired 63% stake in McConnell Dowell
2000	• Acquired 100% stake in LTA Ltd. for a consideration of ZAR 1.4 billion
2002	• Raised ZAR 150 million through the issue of 3-month commercial paper • Launched the first Speno RR24M-12&13 rail profiling machine
2003	• Acquired the remaining 37% stake in McConnell Dowell
2004	• Launched ZAR 1 billion, guaranteed seven-year convertible bonds
2007	• Sold its 45.65% stake in Holcim South Africa for a cash consideration of ZAR 6.8 billion
2014	• Raised ZAR 2 billion through the issue of senior unsecured convertible bonds • Sold its 100% stake in Electrix Pty Limited in Australia and Electrix Limited in New Zealand for consideration of ZAR 1.4 billion
2015	• Sold 70% of Dimopoint Proprietary Limited's properties for a cash consideration of ZAR 1.3 billion
2018	• Raised ZAR 493.2 million through rights offer by issuing 4.9 billion Ordinary shares at a price of ZAR 0.1 per share • Laid out a comprehensive restructuring plan to focus on its key operating entities • Raised ZAR 1.4 billion in equity and ZAR 460 million in fresh debt to retire ZAR 2 billion of convertible bonds
2019	• Sold Aveng Grinaker-LTA Mechanical and Electrical business for a cash consideration of ZAR 72 million
2021	• Consolidated its shares in the ratio of 500:1 • Raised ZAR 592 million through equity financing • Reduced debt on its balance sheet by 42% from FY'20
2022	• Sold Infraset Effingham factory for a cash consideration of ZAR 19 million • Entered into an agreement to dispose of Trident Steel for ZAR 700 million

2023	• Entered a new five-year contract of approximately ZAR 7 billion with Tshipi é Ntle • Won an AUD 714 million contract to deliver the Fitzroy to Gladstone Pipeline project in a 50/50 joint venture with BMD Constructions • Completed the disposal of Trident Steel for total cash proceeds of ZAR 1.2 billion

Corporate Strategy

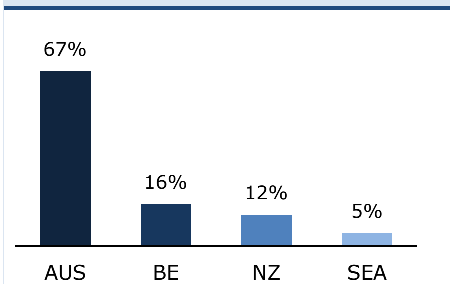
Until 2018, Aveng had several business units providing manufacturing, construction & engineering, and steel beneficiation services across several countries. However, the large number of businesses led to inefficiencies and the Group faced significant challenges in its operations and was unprofitable from FY’14 to FY’20. Furthermore, the pandemic led to a sudden halt of activities due to the lockdowns imposed by governments across the world. To achieve profitability and deleverage its balance sheet, the Group devised a comprehensive plan in 2018 to focus exclusively on its key operating units and dispose of its unprofitable business verticals.

Aveng has achieved its stated goals till now and was able to achieve profitability in FY’21 after seven years. The Group has sold several non-operating and unprofitable units since then, generating a significant amount of cash. The Group has been working on optimizing its capital structure. It raised ZAR 592 million through equity financing in FY’21 and has reduced its external debt through various means, including by repaying ZAR 398 million in FY’22. Aveng completely repaid its South African legacy debt of ZAR 478 million and short-term trade finance facility of ZAR 450 million in FY’23. Aveng’s External Borrowings and Other Liabilities increased to ZAR 1.0 billion in FY’23. The key points of the Group’s strategy are as follows:

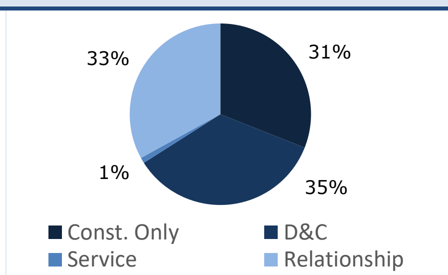
Narrowing Focus to Core Operating Groups: The Group laid an extensive plan to improve overall profitability and operating performance by disposing of its inefficient and underperforming business units and focusing solely on the McConnell Dowell and Moolmans. The goal of the Group was to underpin the growth of the core operating entities as the Group believes that these entities have the greatest growth potential. Aveng aims to generate positive cash flows by divesting unprofitable and cash-burning business units. This strategy would have a lasting impact on the Group’s operations as it will be able to improve its capital structure and liquidity position. Until now, the Group has completed the disposal of Duraset, Infraset Pietermaritzburg, Swaziland, Brakpan & De Aar, and REHM. The Group has also disposed of a number of Aveng Infraset factories and the Aveng Automation & Control Solutions business in FY’21. The Group completed the disposal of its non-core assets with the completion of the disposal of Trident Steel for ZAR 1.2 billion on April 28, 2023. The Group has received ZAR 2.4 billion from the disposal of its non-core assets till June 30, 2023.

Diversifying Clients and Project Types: Over the years, Aveng has built the capacity and capability to undertake diversified projects with complex project deliverables both in contract mining and construction & engineering. As a result, the Group has undertaken several projects across different sectors, customers, and disciplines which has helped it to reduce its overall risk profile and overdependence on a single discipline / customer. Under McConnell Dowell, the work in hand of Transport, Building, and Water & Wastewater projects accounted for 45%, 18%, and 21% respectively as of June 30, 2023. The charts below show the work in hand of McConnell Dowell by business unit, type, and discipline at the end of FY’23:

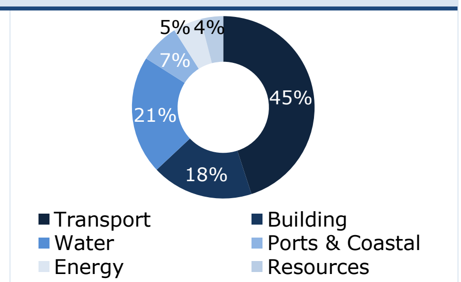
Work in Hand by BU



Work in Hand by Type



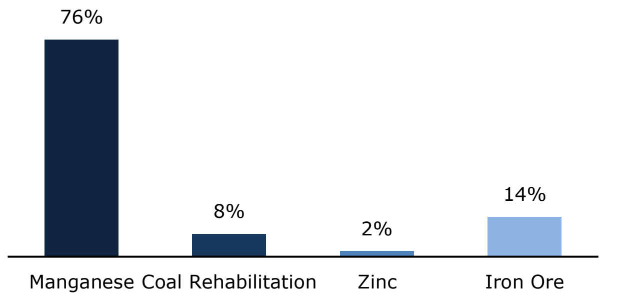
Work in Hand by Discipline



Source: *Annual company presentation (2023)*

In parallel to the diversification in McConnell Dowell's project portfolio, the current projects of Moolmans are also diversified with respect to geography and clients. The company provides mining support services across a diverse range of commodities for various multinational clients with minimal credit risk. Clients across different geographies and diverse commodity range helps the company to reduce its dependence on a single client and provides a cushion from market price volatility of a single commodity. The table on the right shows Moolmans' work in hand as of June 30, 2023.

Moolmans' Work in Hand



Source: *Annual company presentation (FY'23)*

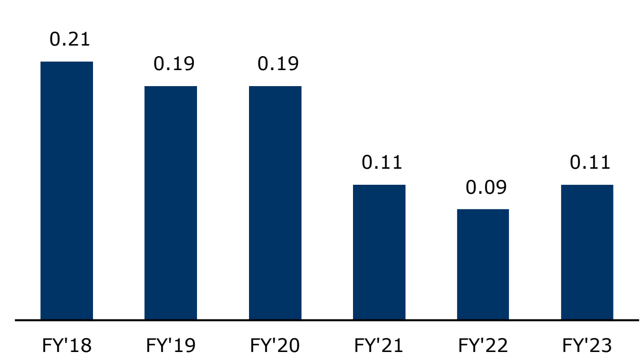
Deploying and Optimizing Existing Fleet: Moolmans' business model requires the use of high-end equipment, trucks, machines, and ancillary tools for undertaking mining and other support activities. The majority of company's current fleet needs to be replaced or optimized to continue operating on a normal scale. The company has assigned a dedicated team to design and execute a plant optimization strategy. Moolmans is also negotiating with Original Equipment Manufacturers ("OEM") to secure equipment and finance. To get the most out of its investment, the company will optimize and appropriate both new and existing fleet to its projects. Moolmans has committed to an investment of ZAR 900 million in new heavy mining equipment, out of which ZAR 613 million of equipment was purchased in FY'23. On January 29, 2023, Moolmans entered into a new five-year contract with Tshipi é Ntle, and with the help of this contract, the company has placed an order for 16 CAT 785D trucks, two Liebherr excavators, four bulldozers and is also fully refurbishing an existing Liebherr excavator. Additionally, a new and optimized fleet will allow the company to showcase its capability and resources to existing and prospective clients, which could further lead to a growth in the number of projects. Apart from the human resources and use of technology, capital investment is an important aspect driving the growth of companies in the field of mining support services. The execution of this plan will entail significant capital expenditure and will be a crucial step in Moolmans' path to increasing revenue and profitability.

The Group had planned a phased growth trajectory for Moolmans wherein it focused on restructuring and optimizing its operations until 2023. During this "reset'' phase, the Group had planned to hire senior and executive-level personnel, to win premier offering projects, and to build strong relationships with mine design consultants. The second phase will be the 'growth' phase, from 2024-2025, wherein the company will focus on growing its business organically and building the Moolmans brand through extensive marketing and delivering projects. During 2026-2027, the company will transition towards its next phase, focusing on acquisitions and targeting new markets.

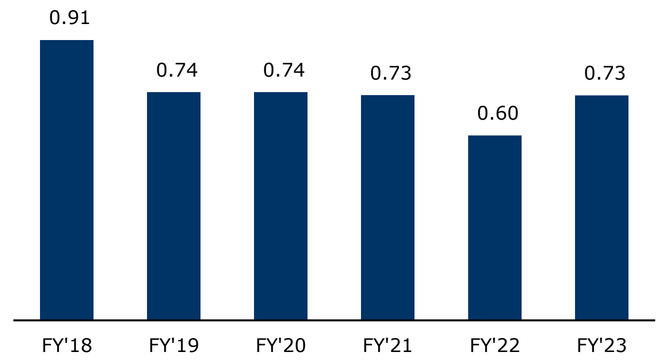
Deleveraging the Balance Sheet: Among all its efforts to restructure, the Group has been majorly focused on reducing its unsustainable debt levels to reduce its financial costs and improve its capital structure. At the end of FY'18, the Group had a total debt of ZAR 3.3 billion which it has been able to reduce by over 69% to ZAR 1.0 billion at the end of June 2023 by raising new capital through a rights offer, early redemption of bonds, renegotiating current debt, and generating cash to pay off parts of debt earlier than maturity by selling its assets. Furthermore, the Group has been able to achieve a majority of its goals to reduce leverage till now. With the foundation laid, the Group plans to further reduce its debt levels and generate positive cash flows from its core operations.

Improving Employee Safety and Enhancing Focus on ESG and Digitalization: Construction and mining are highly labor-intensive industries and thus management of the human resources is one of the most critical functions for them. Employee safety and workplace fatality is a big challenge faced by these companies. Lost Time Injury Frequency Rate ("LTIFR") and Total Recordable Injury Frequency Rate ("TRIFR") are two widely used industry metrics to measure the lost time to injuries over a certain period of hours worked. The Group has stringent measures in place to reduce such fatal incidents and with these efforts, it has been able to get positive results for these metrics over the past years. The following charts show the Group's 12 month rolling LTIFR and TRIFR over the past years.

Group's 12 month rolling LTIFR



Group's 12 month rolling TRIFR



Source: *Integrated Report (FY'23); Annual Company Presentation (FY'23)*

Automation and digitalization have revolutionized and brought landmark changes to every industry. The Group has also worked on the same lines to use more technology and related process leading to efficiency, repeatability, transparency, and predictability. The use and scope of digitalization in the industry requires the simultaneous use of Information Technology, Operational Technology, and Digital Engineering. To have these processes, the Group plans to dedicate a significant amount of its budget on these tech-enabled initiatives. Aveng will focus more on analytics, artificial intelligence, and robotics which would result in a safer work environment, reduced delays and improved productivity, optimized planning of projects, and lower labor shortages. Additionally, the Group's commitment to the environment, sustainable practices, and good governance has been increasing over the years. The Management has also developed a new ESG framework based on Aveng's purpose and values and is focused on improving stakeholder relationships. These include reducing carbon emissions, reducing consumption of resources and improving efficiency, effective risk management, internal procedure governance, and ethical conduct among others.

News

Aveng appoints Mr. Nicholas Bowen as an independent non-executive director

July 18, 2023
Mr. Michael James Kilbride and Ms. Mavis Ann Hermanus have retired as independent non-executive directors of Aveng with effect from July 17, 2023. The Board has appointed Mr. Nicholas Bowen as an independent non-executive director to the Board with effect from July 17, 2023.

Aveng changes its sponsor and appoints Valeo Capital (Pty) Limited as its new sponsor

July 4, 2023
Aveng has changed its sponsor and has appointed Valeo Capital (Pty) Limited as its new sponsor with effect from Friday, 7 July 2023.

Aveng receives ZAR 210 million related to the disposal of Trident Steel

June 6, 2023
Aveng provided a loan of ZAR 210 million to a separate company, in order to subscribe for 30% in equity of the new Trident Steel Business. The 30% holding was subject to a call option, exercisable at any time within 12 months for ZAR 210 million. The payment to Aveng was secured by a demand guarantee. The option holder exercised the call option and Aveng has in turn called upon the demand guarantee of ZAR 210 million with interest till the date of settlement i.e. June 2, 2023.

Aveng completes the disposal of Trident Steel

May 3, 2023
Aveng completed the disposal of Trident Steel for ZAR 1.2 billion. The transaction comprised ZAR 700 million in purchase consideration, ZAR 264 million as net cash that was retained by Aveng, payment of an accumulated ticking fee that was equivalent to ZAR 75 million, and a refund of ZAR 183 million that was provided by the Group to Trident Steel as additional liquidity to fund its growth. The Group also provided a loan of ZAR 210 million which was a part of the purchase consideration, to a separate company. The interest payable on the loan is 17%, which must be paid monthly. The loan is secured by a demand guarantee and the loan provides the right to Aveng to subscribe for 30% in the equity of the new Trident Steel business that is reserved for BBBEE participation.

Aveng appoints Mr. David Noko as an Independent Non-Executive Director

March 30, 2023
Mr. Bernard Swanepoel resigned as an independent non-executive director of Aveng and as a member of the Risk Committee and the Safety, Health, and Environment Committee. Bernard Swanepoel resigned from the Group to pursue his personal business interests on a full-time basis. Aveng's Board appointed Mr. David Noko as an independent non-executive director with effect from March 31, 2023. Mr Noko has also been appointed to the Risk Committee, Safety, Health and Environment Committee, and the Tender Risk Committee.

McConnell Dowell wins an AUD 714 million contract by the Gladstone Area Water Board and Queensland Government

February 28, 2023
McConnell Dowell is awarded an AUD 714 million contract by the Gladstone Area Water Board and Queensland Government, to deliver the Fitzroy to Gladstone Pipeline project. The design and construct project will be delivered as a 50/50 joint venture with BMD Constructions. The project comprises of an approximately 117-kilometre pipeline, a water treatment plant, reservoirs and pumping stations.

Moolmans enters into a new five-year contract with Tshipi é Ntle

January 31, 2023
Moolmans has entered into a new five-year contract with its long-standing client Tshipi é Ntle. The new contract is valued at approximately ZAR 7 billion. This contract will result in significant investment in equipment, people, processes and systems and is firmly aligned with Aveng's goal of ensuring a fit-for-purpose organisation capable of sustainable and profitable long-term growth. Moolmans, with support of Tshipi é Ntle, has placed an order for 16 new Cat 785D trucks, five of which are already on site and awaiting commissioning. The remaining 11 trucks are expected to be fully operational by June 2023. Additionally, two new Liebherr excavators and four new bulldozers are on back order, together with an existing Liebherr excavator undergoing a full OEM refurbishment.

Aveng secures new contract worth AUD 1.4 billion

October 13, 2022
McConnell Dowell has increased its work in hand by 39% to AUD 3.5 billion as of September 30, 2022, after successfully securing AUD 1.4 billion of new work. The new work spans across the Company's diverse specialist capabilities and disciplines, with 52% of the new work being in Design and Construct, 34% Alliance, and 14% Construct only.

Aveng disposes of Trident Steel for ZAR 700 million

October 4, 2022
Aveng has entered into a Sale of Business Agreement to dispose of Trident Steel to Trident Steel Africa Proprietary Limited for an amount of ZAR 700 million, excluding cash on hand. Aveng will provide ZAR 210 million of funding to a separate company in order to subscribe for 30% of the equity in the purchasing company and will thereby retain a 30% interest in the business, specifically reserved for BBBEE participation.

McConnell Dowell wins the contract for New Bridgewater Bridge in Tasmania

July 19, 2022
Aveng has been awarded an AUD 600 million (approximately ZAR 6.9 billion) contract by the Tasmanian Department of State Growth to deliver Tasmania's largest-ever transport infrastructure project – the New Bridgewater Bridge. The awarded contract will increase McConnell Dowell's work in hand to approximately AUD 3.0 billion (ZAR 35 billion) in July 2022.

See important disclosures on page 49 of this report.

Listing Information

Aveng Limited, headquartered in Johannesburg, South Africa, is listed on the Johannesburg Stock Exchange – (JSE: AEG).

Contacts

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Top Beneficial Shareholders as of June 30, 2023

Equity Holder	% Shareholding
Highbridge Capital Management	15.5%
Whitebox Advisors	13.1%
Absa Group	7.0%
Steyn Capital	5.8%
Standard Bank	4.5%
Ninety One	4.3%
ATM Holding	2.1%
Mr. Macartney Adrian Henry	1.0%
Mr. Flanagan Sean Joseph	1.0%
Firstrand Retirement Fund	0.9%
Others	44.8%
Total	**100.0%**

Source: *Aveng Annual Report 2023*

Management and Governance

Sean Flanagan
Chief Executive Officer

- Has over 40 years of experience in the Construction industry and is an expert in contract and claims negotiation, project engineering, project and construction management, implementing company strategies, and troubleshooting underperforming projects and businesses
- Worked at Murray & Roberts for 19 years, where he held a variety of roles ranging from operations to general management and was also the Executive Director of the Board

Adrian Macartney
Chief Financial Officer

- Has over 28 years of experience in assurance, transactions, and advisory industry
- Worked at EY as a Partner and PwC as a Senior Manager
- Holds a B.Compt (Hons) from the University of South Africa, a B.Com degree from the University of the Witwatersrand, and is a qualified Chartered Accountant (SA)

Philip Hourquebie
Independent Non-Executive Director

- Works as a Director at Investec Ltd, Investec plc, Investec Bank Ltd, and Investec Property Fund Ltd, and is a Trustee of the Denis Hurley Association
- Worked at EY for 38 years where he held various leadership positions including CEO South Africa, Managing Partner: sub-Saharan Africa region, and Managing Partner: central and south-east Europe region
- Holds a B.Com (Hons) in finance, a B.Acc from the University of KwaZulu-Natal, and is a qualified Chartered Accountant (SA)

Bridgette Modise
Independent Non-Executive Director

- Worked as a Non-Executive Director for several companies including Sun International, PPC Ltd., UNISA SBL, Nestlife, Tellabs SA, Coriant, Kanhym, and Astron Energy
- Qualified Chartered Global Management Accountant and a Chartered Accountant (SA)

Nicholas Bowen
Independent Non-Executive Director

- Has over 40 years of experience in contract mining, construction, and quarrying
- Ex-CEO of Macmahon Holdings and Lubambe Copper Mines
- Led the global mining services business at Orica and mining operations at the Sishen mine for Kumba which is a part of the Anglo American Group
- Holds a Bachelor of Engineering in Mining Engineering from the University of NSW, Australia

Bradley Meyer
Independent Non-Executive Director

- Founding member of Ducera Partners, an investment banking advisory company
- Worked as Managing Director of Perella Weinberg Partners, and Millstein and Co.
- Served as the Director of the board at Houlihan Lokey
- Holds a graduate degree from Harvard University

David Noko
Independent Non-Executive Director

- Held senior and executive roles at Air Chefs, De Beers Consolidated Mines Limited and AngloGold Ashanti Limited
- Served on the boards of Royal Bafokeng Platinum Limited, Harmony Gold and Astrapak Limited
- Chairman of the Council of the University of the Free State and non-executive director at Aveng Moolmans Holdings
- Holds an MBA from Heriot-Watt University and an MDP from Wits University

 See important disclosures on page 49 of this report.

Projects

The Group's two key operating entities – McConnell Dowell and Moolmans have several ongoing projects from a wide range of customers including state and national governments, private entities, and government bodies. Most of the McConnell Dowell's projects are located in Australia, New Zealand, Pacific Islands, and southeast Asia, while Moolmans' current projects are located in South Africa. Moolmans has previously worked on projects in Botswana, Burkina Faso, Chile, Ghana, Guinea, Mali, Namibia, Tanzania, and Zambia. The details of some of the Group's projects under the two entities are mentioned below.

McConnell Dowell

Palembang Waste Water Treatment Plant		
Customer Name	**Project Location**	**Project Type**
Palembang City Council	*Palembang, Indonesia*	*Civil*
The scope of the project under phase one includes the design capacity of up to 20,000 m^3 Biotrickling Treatment Plant which includes concrete structures, treatment facilities and system, tanks, pumping station, and general infrastructure works for the new plant and pump station. The project forms a major part of a wider program to improve Indonesia's overall sustainability and resilience of essential water assets. The project has been co-financed by the Australian Government and the Government of Indonesia		

Fitzroy to Gladstone pipeline		
Customer Name	**Project Location**	**Project Type**
Gladstone Area Water Board	*Gladstone, Queensland*	*Civil*
McConnell Dowell won the design and construct contract to deliver the Fitzroy to Gladstone Pipeline project for the Gladstone Area Water Board and Queensland Government. The project is being delivered as a 50/50 joint venture with BMD. The project is comprised of 117-kilometre pipeline, a water treatment plant, reservoirs and pumping stations. The construction on the project was anticipated to begin in late 2022 and the new pipeline estimated be completed in 2025-2026.		

Eastland Port Wharf 7 Upgrade		
Customer Name	**Project Location**	**Project Type**
Eastland Port	*Gisborne, New Zealand*	*Marine, Road, and Bridges*
McConnell Dowell won the design and construct contract to rebuild Wharf 7 in March 2022. Construction on the project was anticipated to begin in early April and is expected to take approximately 18 months to complete. The contract is a part of Stage One of the USD 60 million Twin Berth Project, which will enable two handymax (180 m to 200 m long) ships to load and unload at the port safely.		

Corban Reserve Project		
Customer Name	**Project Location**	**Project Type**
Auckland Council Healthy Waters	*Auckland, New Zealand*	*Civil*

The scope of the project includes installing a new 713 m stormwater pipeline under the border road in West Auckland using a 2,100 mm in diameter micro-tunnel boring machine. The project has been divided into three stages. The first stage involves the construction of new pipelines and upgradation of previously built structures. The second stage includes the decommissioning of the old Corban Reserve stormwater pipe. The third stage involves the upgradation of the existing pipeline along Henderson Valley Road and repair of the existing stormwater culvert. The project is expected to be completed by 2024.

New Bridgewater Bridge		
Customer Name	**Project Location**	**Project Type**
Tasmanian Department of State Growth	*Tasmania, Australia*	*Marine, Road, and Bridges*

The project includes the design and construction of the New Bridgewater Bridge in Hobart. The new bridge will replace the existing lift-span bridge which was built in the 1940s to provide a new modern crossing over the river Derwent, helping people to cut the travel times and improving freight routes around the state capital. The selected design features a new four-lane bridge constructed downstream of the existing bridge. The Group received the final contract for this project in July 2022 and plans to start construction in late 2022.

Tengah Plantation, Tengah Park, and Bukit Batok West Stations and Viaduct		
Customer Name	**Project Location**	**Project Type**
Land Transport Authority	*Singapore*	*Civil, Rail*

This project is a part of the new Jurong Regional Line MRT development and includes three elevated stations at Tengah Plantation, Tengah Park, and Bukit Batok West. The 150 m long station platforms are accessed through station entrance structures which include three long span link bridges over key arterial roads and the Pan Island Expressway. The viaduct comprises post-tensioned precast segments that will be erected using a combination of launching girders and lifting frames. The project includes a stretch of viaduct erected within meters of multistorey residential towers and a long span crossing of Bukit Batok Road.

 See important disclosures on page 49 of this report.

Kidston Pumped Storage Hydro		
Customer Name	**Project Location**	**Project Type**
Genex Power	*Queensland, Australia*	*Civil, Electrical, Mechanical, and Hydropower & Dams*

This project involves the construction of the Kidston Pumped Storage Hydro facility in North Queensland, in partnership with Joh Holland. McConnell Dowell claims that this is an innovative project that involves the world's first conversion of a disused gold mine into a pumped-storage hydroelectric power generation facility. The facility has the potential to generate up to 250 MW of rapid response, flexible power for Australia's National Electricity Market. The project involves the conversion of two existing mine pits into reservoirs. The construction involves significant underground infrastructure, including a large powerhouse cavern, waterway shafts, and tunnels to allow the transfer of water between the upper and lower reservoirs. Once completed, the facility will generate power during peak demand periods and return water to the upper reservoir during off-peak periods. The facility will generate enough electricity to power 143,000 homes for eight hours.

Ship loader, Berth Replacement, and Hay Point		
Customer Name	**Project Location**	**Project Type**
BHP Mitsubishi Alliance	*Queensland, Australia*	*Marine*

This is a brownfield project located within the lease boundaries of BHP Mitsubishi Alliance's existing Hay Point Coal Terminal near Mackay, Queensland. It includes the disassembly and replacement of one of the existing ship loaders and berths to improve materials handling throughput and cyclonic wave immunity. The contract was awarded by BHP Mitsubishi Alliance which was followed by a twelve-month collaborative Early Contractor Involvement process involving BMA, Aurecon, and McConnell Dowell. This process helped the Group to add value through smarter, safer, and more constructible solutions.

Batangas LNG Terminal		
Customer Name	**Project Location**	**Project Type**
First Gen	*Batangas, Philippines*	*Civil, Mechanical, Pipeline, and Marine*

This project was undertaken to build and deliver the Interim Offshore Terminal Project at the First Gen Corporation's Batangas LNG Terminal located in the First Gen Clean Energy Complex. Under the contract, McConnell Dowell will undertake the Engineering, Procurement, and Construction of both the Multi-Purpose Jetty and Onshore Gas Receiving Facility. Once completed, the Interim Offshore Terminal Project will allow First Gen to accelerate the introduction of LNG into the country and serve the natural gas requirements of existing and future gas-fired power plants in the Philippines.

Tuas Water Reclamation Plant - Contract C1A		
Customer Name	**Project Location**	**Project Type**
Public Utility Board	*Tuas View Basin, Singapore*	*Civil and Tunnelling*

This project involves the construction of a new water treatment facility as part of Singapore's Deep Tunnel Sewage System Phase 2 which will receive both industrial and domestic wastewater. The project scope includes a 22 kV substation and a temporary power network for the whole site, a temporary sewer line, temporary potable water, and NEWater line; temporary drainage; temporary roads; client site office, site-wide street lighting, CCTV, and Wi-fi systems. It also entails constructing permanent roads and drains, major yard piping, electrical and ICA duct banks and manholes, and a 100 m long near-shore outfall structure.

Ports of Auckland Outfall Upgrade Project		
Customer Name	**Project Location**	**Project Type**
Auckland Council Healthy Waters	*Auckland, New Zealand*	*Marine, Tunneling and, Underground*

The scope of work for this project includes service relocation, piling works for both the outlet and inlet shafts, excavation works, tunneling, chamber and outfall construction, and culvert strengthening. The project is funded by the Auckland Unitary Plan. Once the project is complete, the new outfall will increase the stormwater network's capacity and improve the resilience of downtown Auckland's infrastructure.

Archer River Crossing		
Customer Name	**Project Location**	**Project Type**
Department of Transport and Main Roads	*Cape York Region, Queensland*	*Procure and Construct*

The Archer River Crossing project is a part of the Cape York Region Package Stage 2. The program is funded by Australian and Queensland governments under the Roads of Strategic Importance program. The crossing is being upgraded to reduce its closure due to floods. The new crossing is believed to reduce the average annual time of closure to less than two days hence improving connectivity in the region. The scope of work includes a new 230 m long and 10.4 m wide deck bridge over Archer River, bitumen surfacing, earthwork and drainage, and guardrails, signs, and pavement marking.

Warkworth Wastewater Pump Station		
Customer Name	**Project Location**	**Project Type**
Watercare Services Ltd	*Auckland, Newzealand*	*Mechanical and Pipeline*

This project was awarded to McConnell Dowell by Watercare Services Ltd. The project is a part of the Warkworth to Snells Transfer Pipeline scheme, which conveys wastewater from Warkworth to Snells Beach. The scope of the work involves the construction of a new 247 l/s Wastewater Pump Station adjacent to the existing Lilburn Street Pump Station in Lucy Moore Memorial Park. An innovative caisson (sunk shaft) method will be implemented for the construction of the pump station and storage tank providing numerous benefits including reduced construction footprint, less noise and vibration impact, minimized time required on-site, and enhanced safety for site workers and park users.

See important disclosures on page 49 of this report.

Level Crossing Removal Project		
Customer Name	**Project Location**	**Project Type**
Victorian State Government	*Victoria, Australia*	*Road and Bridges*

This project is a part of the Western Program Alliance, delivering a piece of the Victorian State government's crossing removal program to remove 85 level crossings by 2025. The Alliance includes the Level Crossing Removal Project, MTM (network operator), and Arup and Mott Macdonald as design partners. Until now, six-level crossings have been removed in the first four years. The current focus of the alliance is to complete the removal of two additional level crossings – one in Hoppers Crossing and one in Williamstown North. A 'mobile renewable generator' was used for site power and the use of diesel-powered mobile generators was minimized to reduce carbon emissions. Additionally, the project was powered through the use of renewable energy which is anticipated to save 116 tonnes of carbon equivalents per year.

BCI Minerals' Mardie Marine Structures		
Customer Name	**Project Location**	**Project Type**
BCI Minerals	*Pilbara, Australia*	*Marine, Electrical, and Mechanical*

This project involves the design and construction of BCI Minerals' Mardie Salt and Potash Project in Western Australia. The Mardie project presents an opportunity to develop a large-scale solar evaporation operation on the Pilbara coast. Once completed, the capacity of the facility is estimated to be 5.35 million tonnes per annum of high purity salt and 140,000 tonnes per annum of sulphate of potash over an operating life of approximately 60 years. McConnell Dowell's work includes the design, supply fabrication, construction, installation, testing, and commissioning of a piled 2.4 km jetty structure, materials handling conveying system including ship loader, non-process infrastructure, and ancillary equipment.

Healesville - Koo Wee Rup Road Upgrade		
Customer Name	**Project Location**	**Project Type**
Major Road Projects Victoria	*Victoria, Australia*	*Civil, Roads, and Bridges*

McConnell Dowell has partnered with Major Road Projects Victoria to deliver the Healesville – Koo Wee Rup Road Upgrade. The upgrade involves an extra traffic lane, new traffic lights, a new bridge, new roundabouts, new shared walking and cycling path, and safety barriers along the existing road. The benefits of this upgrade include lowered risk and severity of crashes, improved traffic flow and travel times, and a new link to the southeast walking and cycling network. There is an environmental threat related to the project as the area is home to a threatened population of Southern Brown Bandicoots and Growling Grass Frogs. McConnell Dowell is making efforts to preserve their numbers and reduce the negative impact of construction on the local flora and fauna during breeding seasons.

 See important disclosures on page 49 of this report.

SA Water Frameworks		
Customer Name	**Project Location**	**Project Type**
SA Water	*South Australia*	*Civil, Electrical, Mechanical, and Pipeline*

This project is undertaken by McConnell Dowell Diona joint venture (Water North) to design and construct the SA Water capital delivery program for the regulatory business period of 2020-24. The program consists of approximately 150 projects involving the design and construction of water infrastructure consisting of water trunk mains, dams and earth bank storage construction and remediation, water storage tank construction and rehabilitation, pipeline replacements, networks, mechanical and electrical upgrades, and water treatment plants construction.

Narre Warren - Cranbourne Road Upgrade		
Customer Name	**Project Location**	**Project Type**
Major Road Projects Victoria	*Victoria, Australia*	*Roads and Bridges*

This project includes the design and construction of the Narre Warren – Cranbourne Road Upgrade in Melbourne's south-eastern growth corridor. The project will lead to improved traffic flow, reduced travel times, improved access around Cranbourne town center, and will make it easier and safer for pedestrians and cyclists to move around the area. McConnell Dowell's scope of work includes adding an extra lane in each direction between Thompsons Road and the South Gippsland Highway, installing traffic lights, upgrading intersections, building new shared walking and cycling paths, and installing safety barriers.

Adelaide Living Beaches		
Customer Name	**Project Location**	**Project Type**
Department of Infrastructure and Transport; Department for Environment and Water	*Adelaide, Australia*	*Marine*

This project includes contracts for the design and construction of the Adelaide Living Beaches Sand Transfer Infrastructure project in Adelaide, South Australia, and for the operation and maintenance of the system. The contracts involve the construction of sand transfer infrastructure along a linear belt of 9 km of coastline. The infrastructure includes two sand management cells, each containing independent slurry pipelines and associated water pumping pipelines. The first contract involving the construction of the infrastructure was completed in 2013 and the contract for maintenance of the project was to last for 10 years, completing the project in 2023.

Rail Services		
Customer Name	**Project Location**	**Project Type**
Several Australian Entities	*Australia*	*Rail*

McConnell Dowell has multiple contracts with several customers across Australia for providing rail services such as track laying, ballast regulating, mud spot removal, level crossing upgrades, tamping, and flashbutt welding. Some of the company's current and recent rail services contracts include ARTC, V/Line, and VicTrack among others.

Tweed River Entrance Sand Bypassing Facility		
Customer Name	**Project Location**	**Project Type**
NSW & Queensland Government	*Tweed Heads, Australia*	*Marine, Electrical, Mechanical, and Pipeline*

The contract for this project with the New South Wales and Queensland State Government involves the design, construction, and operation of the Tweed River Entrance Sand Bypassing Facility. The two main objectives of the project were to establish and maintain a safe and navigable entrance to the Tweed River and to restore and maintain the ecology and amenity of beaches on the southern Gold Coast. The construction also involved a sand collection jetty which is approximately 450 m long and extends approximately 300 m from the shoreline. McConnell Dowell continues to be the operator and maintainer of the system for 25 years.

Port Kembla Gas Terminal - Marine Works		
Customer Name	**Project Location**	**Project Type**
Australian Industrial Energy	*Port Kembla, Australia*	*Marine*

Australian Industrial Energy appointed McConnell Dowell for an engineer, procure, and construct contract for the new marine facilities, as it is building a gas import facility at Port Kembla to bring additional energy supply to the eastern seaboard of Australia. McConnell Dowell's scope of work includes the new wharf construction, revetment, quay wall, wharf furniture, main equipment foundations, and marine loading arm platform structures.

See important disclosures on page 49 of this report.

Moolmans

Gamsberg		
Customer Name	**Project Location**	**Mine Type**
Black Mountain Mining	*South Africa*	*Zinc*
The project was undertaken in 2017 for the establishment of a fleet of mining equipment, workshops, offices, stores and related support facilities on site, the formation of access ramps, as well as mining of ore and waste material. Additional work involves drilling, blasting, presplit as well as trimming of final pit walls, forming and maintaining dumps and ore stockpiles, construction of haul roads and implementing dust control measures.		

Klipspruit		
Customer Name	**Project Location**	**Mine Type**
South 32 Coal Holdings	*South Africa*	*Coal*
The project was undertaken in 2018 and involves pre-stripping works, loading, and hauling of overburden and mid-burden materials totaling approximately 9 million in-situ cubic meters per annum, and pit services related to the remainder of the main pits at Klipspruit. Klipspruit colliery is a single dragline, multi-seam, open cut mine that is combined with truck and shovel mining in the mine pits.		

Union Mine		
Customer Name	**Project Location**	**Mine Type**
Union Mine	*South Africa*	*Platinum*
Moolmans undertook this project in 2017 for the rehabilitation of haulages, which includes the replacement of rails to ensure alignment for the smooth transition between old and new rails. Additional work at the site includes the replacement of pipes, installation of bolts, anchors, shotcrete, and removal of electrical cables.		

Lefa		
Customer Name	**Project Location**	**Mine Type**
Nordgold PLC	*Guinea*	*Gold*
The scope of work for this project includes assisting the client, Nordgold PLC, with the current mining operation, which includes loading and hauling over 600,000 in-situ cubic meters per month. The mining operation is a typical modern open-cut operation with three major mining areas and several smaller higher-grade satellite pits.		

Klipbankfontein Pit, Kolomela Mine		
Customer Name	**Project Location**	**Mine Type**
Sishen Iron Ore Company	*South Africa*	*Iron Ore*

Kolomela mine is a part of Anglo Americans' Sishen Iron Ore Company. The contract with Moolmans involves a target volume of 33,000,000 tonnes over 30 months. Moolmans has currently employed 300 people at the site, and it expects that this number will increase to 400. The mining fleet consists of Komatsu PC 3000's loading Caterpillar 777 dump trucks, a Sandvik D45KS drill rig, Caterpillar D9, and D10 dozers along with the standard ancillary equipment.

Nkomati		
Customer Name	**Project Location**	**Mine Type**
Nkomati JV	*South Africa*	*Nickel*

Moolmans won the contract for Nkomati open cut mining operations by the Nkomati JV in December 2013. It is a five-year contract which began in July 2014. The contract with Moolmans includes a full mining service, including bush clearing, top soil stripping, drilling and blasting, loading and hauling of ore and waste, and re-handling operations.

Amandelbult		
Customer Name	**Project Location**	**Mine Type**
Dishaba Mine	*South Africa*	*Platinum*

Moolmans received the contract for this project from Dishaba Mine in 2014. According to the contract, Moolmans must rehabilitate the ore-pass system for the undergound workings. The company is currently in the final stages of repair of these passes. The client has also asked for a quote for the installation of box fronts, grizzlies and equipping of panel equipment.

Tshipi Borwa		
Customer Name	**Project Location**	**Mine Type**
Tshipi é Ntle	*South Africa*	*Manganese*

Moolmans received the contract for this project from Tshipi é Ntle in October 2011. The initial contract was for five years for open-cut mining to provide a full mining service for overburden and manganese ore. An extension for the contract was negotiated for an additional 60 months, extending the term up to 2020. Moolmans is currently mining over 12 million BCMs per annum for this project.

Kolomela		
Customer Name	**Project Location**	**Mine Type**
Sishen Iron Ore Mining	*South Africa*	*Iron Ore*

Moolmans was first awarded the contract by Sishen Iron Ore Mining at Kolomela in 2012 for 13 months of mining services. After the completion of the initial contract, another 30-month contract was negotiated for mining. A third contract extended the term further until the end of May 2019, with a formal retender process underway for a further 60-month contract to mine 31 million BCMs per annum.

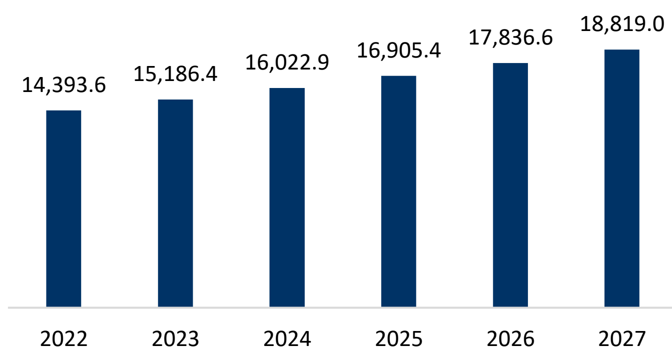
Sishen		
Customer Name	**Project Location**	**Mine Type**
Sishen Iron Ore Mining	*South Africa*	*Iron Ore*

Moolmans was first contracted for the project at Sishen Iron Ore in 2006. The company secured additional contracts after 2006 and the latest contract for 60 months was secured in 2017 for waste removal. Moolmans is also constructing haul roads and undertaking dump rehabilitation activities on behalf of the customer.

Industry Analysis

Global Construction Industry

Global Construction Industry (in USD billion)



Source: *Research and Markets*

The Construction industry primarily includes the construction, demolition, renovation, and maintenance of buildings and infrastructure. These activities involve a variety of services from planning and surveying to structural construction and finishing services such as painting and beautification. The global Construction Industry was valued at USD 14,393.6 billion in 2022 and is expected to reach USD 18,819.0 billion in 2027 at a Compounded Annual Growth Rate ("CAGR") of 5.5%.[i] This growth is expected to be driven by increasing demand for construction in developing countries such as India, China, Brazil, Saudi Arabia, and Indonesia. The investment from the private sector in construction and related technology and increased infrastructure and housing spending by governments across the globe will further support the Construction market.

The Construction industry can be broadly classified into Buildings Construction and Infrastructure Construction.

I. Buildings Construction Segments

The Buildings Construction includes a range of activities including design, construction, maintenance, and remodeling of buildings. Based on the type of building constructed the building construction segment is further classified into residential and non-residential building construction segments. The global Buildings Construction market was valued at USD 7,557.4 in 2023. In the future, increasing population, rapid urbanization, and improving economic conditions in developing nations are expected to propel the global Buildings Construction market to USD 9,596.5 billion by 2027, translating to a CAGR of 6.2%.[ii]

a) Non-residential Building Construction Segment: Non-residential Building Construction majorly comprises of construction of commercial buildings such as shops, hotels, malls, and warehouses and institutional buildings such as government offices, municipal buildings, and corporate offices. The Non-residential Building Construction market was valued at USD 2,903.8 billion in 2023 and is expected to reach USD 3,294.4 billion by 2027, translating to a CAGR of 3.2%.[iii] The increasing population, especially in urban regions, is expected to increase the demand for commercial and institutional buildings. According to the UN World Urbanization report, 68% of the world's population will be living in cities by 2050, which would translate to the addition of roughly 2.5 billion people to urban areas.[iv] The Asia Pacific region dominated the industry in 2021 and is expected to continue its dominance in the future owing to its large population and rapid urbanization.

b) Residential Building Construction Segment:

Residential Building Construction includes the construction and remodeling of buildings such as individual houses, apartments, and layouts. The Residential Building Construction market was valued at USD 4,138.8 billion in 2022 and is expected to reach USD 5,393.4 billion in 2027.[v] Asia Pacific is expected to be the fastest-growing region in the forecasted period (2022 to 2027). The biggest players in the Residential Building Construction market are China State Construction Engineering Corporation Limited, Skanska AB, Country Garden Holdings, D.R. Horton Inc., Lennar Corporation, Pulte Corporation, Bouygues S.A., Hochtief AG, TechnipFMC PLC, Larsen & Toubro Limited, Turner Construction, Gilbane Building Company, Laing O'Rourke, Kiewit Corporation, and Bechtel Corporation.

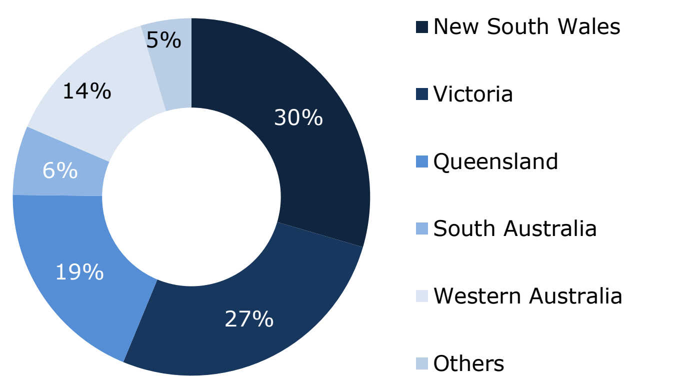
II. Infrastructure Construction Segment

Infrastructure Construction mainly consists of the construction of transportation infrastructure (railways, airports, ports, and roads), social infrastructure (schools, hospitals, and defense), utility infrastructure (power plants, electricity transmission & distribution, gas pipelines, and telecom towers), and mining infrastructure (oil refineries, mines, and smelters). The Infrastructure Construction market was valued at USD 2,566.4 billion in 2023 and is expected to reach USD 3,479.0 billion by 2028, growing at a CAGR of 6.3%.[vi] The Infrastructure Construction market was severely affected due to Covid-19. During the pandemic, governments across the globe were focused on allocating financial resources to health care which resulted in lower infrastructure investment. However, as the pandemic subsides, governments across the globe are investing heavily in infrastructure development to boost economic growth and employment.

Australian Construction Industry

Construction is an essential part of Australia's economy and employed 1.1 million people and reported a gross value addition of AUD 155 billion in 2022.[vii] The value of construction work in the private sector was significantly higher than in the public sector in 2022. According to the Australian Bureau of Statistics, the value of construction work done was AUD 59.0 billion in Q2'23, which was an increase of 0.4% compared to Q2'22. In Q2'23, New South Wales dominated the construction industry with AUD 15.9 billion value of construction work completed, followed by Victoria (AUD 15.8 billion), Queensland (AUD 11.2 billion), Western Australia (AUD 8.3 billion), South Australia (AUD 3.7 billion).[viii]

Construction Work Done by Region (Q2'23)



Source: *Australian Bureau of Statistics*

In its Budget 2023-24, the Australian government announced that it will provide funding of AUD 15.5 billion to support state infrastructure projects. The Australian Government has AUD 120 billion in its national rolling 10-year infrastructure pipeline.[ix] This substantial investment in infrastructure from the government is likely to be a major growth driver for the Australian Construction industry in the coming years.

Industry Trends and Recent Developments

1. Sustainable Construction Practices Gaining Traction

Construction is an energy-intensive process and as per the World Green Building Council, construction accounted for 36% of the global energy use and 39% of global energy-related CO_2 emissions in 2017.[x] New regulations such as the Construction Products Regulation and the European Green Deal are driving the Construction industry towards sustainable practices.[xi] As a result of these developments, the green construction trend which involves the development of buildings and infrastructure projects with minimum environmental impact has been gaining traction over the years. According to the World Green Building Council, the adoption of green construction can decrease the emission of CO_2 by 84 gigatonnes by 2050 and decrease the global construction sector's energy consumption by 50% by 2050.[xii] The construction of green buildings consumes less energy and water compared to conventional buildings, which more than offsets the higher design and material costs incurred making it, more cost-efficient. The Global Green Construction market was valued at USD 265.7 billion in 2020 and is forecasted to reach USD 602.1 billion by 2028 at a CAGR of 10.8%.[xiii]

2. **Continued Surge in Cost of Construction Materials**

   Since 2021, the cost of construction has increased considerably due to the rise in the prices of construction materials such as asphalt, steel, lumber, and copper. The prices of flat steel increased by 131% year-on-year in 2021 to USD 1,384 per tonne, while the prices of lumber reached USD 9.9 per cubic foot in 2021, registering a year-on-year increase of 32%.[xiv] The increase in prices of commodities is majorly attributable to inflationary pressure caused by supply chain disruptions due to the Covid-19 pandemic and heavy demand for raw materials owing to the resumption of economic activity. Although the impact of the Covid-19 pandemic is slowly wearing off, countries across the globe have increased spending on building and infrastructure. This has further increased the demand for raw materials.

Global Mining Support Activities Industry

The Mining Support Activities industry generates revenue by providing services such as loading and hauling, shaft sinking, and blasting to mining companies. The mining companies usually do not maintain the machinery and labor required to conduct mining operations as mining operations involve a variety of activities from geological survey, drilling, blasting to shaft sinking. Hiring, training, and maintaining labor and machinery in each field will be expensive as well as inefficient and hence, mining companies outsource these activities to contract mining companies.

The outbreak of Covid-19 forced governments across the globe to impose lockdowns leading to reduced mining operations around the world. As a result, the Mining Support Activities industry was adversely affected. However, since the end of 2020, the prices of most metals reached multi-year highs which made mining operations relatively more economical. The global Mining Support Activities industry has shown recovery and was valued at USD 236.1 billion in 2021 and it is expected to reach USD 438.2 billion by 2026, implying a CAGR of 13.2%[xv].

Global Mining Industry

The Mining industry comprises companies that extract or provide support for the extraction of minerals, metals, and other valuable resources from the earth. The global Mining industry's revenue is expected to increase from USD 1,845.5 billion in 2021 to USD 2,427.9 billion by 2025 at an implied CAGR of 7.1%.[xvi] This growth is primarily driven by the pent-up demand for mined resources after the covid-induced lockdowns led to a slowdown in the global economic activity.

The prices of most metals fell in 2020 because of the economic slowdown following the Covid-19 outbreak. However, since the end of 2020, prices for many metals such as copper and iron rebounded and reached multi-year highs, driven primarily by the easing of lockdown induced by Covid-19 and the rapid recovery of demand from China.[xvii] However, prices for precious metals experienced a decline in 2021, despite accommodative monetary policies by several central banks. According to the World Bank, the world's GDP growth is expected to slow down from 3.1% in 2022 to 2.1% in 2023. This slowdown, along with tightening monetary policies, might stall the metal prices in the future.[xviii]

South African Mining Support Activities Industry

The South African Metals and Mining industry generated total revenue of USD 52.4 billion in 2020 and is expected to reach USD 76.0 billion by 2025 at an implied CAGR of 7.7%.[xix] South Africa has the largest ore reserves of several key ores, for example, South Africa hosts 90% of the global reserves of platinum, manganese (80%), chromium (72%), vanadium (32%), and gold(13%).[xx] South Africa's non-energy mineral reserves are valued at USD 2.4 trillion to USD 3 trillion in 2020.

South Africa is an Eminent producer and supplier of a range of minerals with more than 1,800 mines and quarries across the nation. South Africa was the largest producer of platinum in 2021 accounting for 72.0% of global production followed by Russia (10.4%), Zimbabwe (8.2%), and Canada (3.9%).[xxi] In 2021, South Africa's total production of metals and minerals showed an increase of 11.2% compared to a contraction of 10.6% in 2020.

However, between 2016-2021 the annual mining output of South Africa dropped by an average annual rate of 0.3%.[xxii] The South African Metals and Mining industry faces a series of challenges including the increasing depths of mines, aging infrastructure, declining ore grades, political instability, and labor shortage. As a reason, despite being blessed with mineral and metal reserves South Africa accounts for less than 1% of the global annual mining exploration expenditure. Due to these challenges along with minimal explorational expenditure and Covid-19 the mining and explorational activities in South Africa have been moderate.

In April 2022, the South African government announced a target to attract USD 900 million of annual investment for the exploration of its mineral wealth by 2025 which, would be equivalent to 5% of the global expected spending on exploration in 2025.[xxiii] With this investment, the government aims to revive its Metal and Mining Industry by focusing on platinum and other metals used in Electric Vehicles ("EV"), battery storage, and the production of hydrogen which, are expected to generate high demand in the future. This in turn is expected to fuel the Mining Support Activities industry in South Africa.

Key Growth Drivers

1. **Depleting Ore Grades in Existing Mines**

   The demand for metals and minerals is increasing due to an increase in infrastructure projects across the globe, increase in population, transition to clean energy, and increased adoption of EVs. However, ore grades in operating mines are constantly depleting. The average platinum reserve grade of leading mining companies in South Africa such as Merensky, UG2, and Platreef has decreased from 4.3 g/t in 2007 to 3.01 g/t in 2020.[xxiv] The decrease in the ore grade has forced mining companies to undertake deeper mineral extractions. The deep mineral extractions have increased the volume of ore mined as well as the cost of operations. Grasberg the world's second-largest copper mine is facing the same issue and as a result, the production has been moved to deep cave deposits.[xxv] The mining support activities companies are expected to benefit from depleting ore grades due to the increased cost and volume of work.

2. **Growing Population Driving Additional Demand**

   Minerals and metals are used in a wide variety of applications such as buildings, cars, mobiles, jewelry, and consumer products. According to the United Nations, the world population is expected to reach 9.7 billion by 2050 and 11 billion by 2100.[xxvi] Additionally, the global per capita GDP is projected to increase from USD 10,916.1[xxvii] in 2020 to USD 14,000 in 2030[xxviii]. An increasing population and a prospering economy would need more items to meet their everyday need. Hence, the demand for metals and minerals is expected to rise in the future. This will lead to more exploration and mining activities, as a result, the demand for mining support activities is also expected to increase in the future.

3. Increasing Demand for Clean Energy

The effects of climate change on the environment are more evident than ever and as a consequence, governments across the globe are trying to shift towards renewable energy. The global renewable energy industry was valued at USD 881.7 billion in 2020 and is projected to reach USD 1,977.6 billion by 2030, exhibiting a CAGR of 8.4%.[xxix] This shift towards clean energy is expected to increase the production of minerals such as graphite, lithium, and cobalt by almost 500% by 2050. It is estimated that over 3 billion tons of minerals and metals are required to deploy clean energy technologies such as wind, solar and geothermal power, along with energy storage facilities to achieve the target of keeping the temperature growth below 2°C.[xxx] As a result, the production of metals and minerals is expected to soar which in turn would increase the demand for mining support activities in the future.

4. Increasing exploration activities

Many mining companies had a tremendous year in 2021 because of strong prices for most commodities resulting from increased demand due to the resumption of commercial activities, combined with a recovery in production due to easing COVID-19 restrictions. The growing demand for metals and minerals and declining ore grades in operational mines have resulted in mining companies focusing on finding high-grade deposits. As a result of these developments exploration activity around the globe has increased. According to S&P Global Market Intelligence, the aggregate annual global nonferrous exploration budget has increased from USD 8.3 billion in 2020 to USD 11.2 billion in 2021. The total annual global nonferrous exploration budget increased from USD 11.2 billion in 2021 to USD 13.0 billion, an increase of 16.1% YoY.[xxxi] This increase in exploration activities is expected to fuel the Mining Support Activities industry.

Risk Profile Analysis

1. Business Risk

Aveng mostly works on long-term contracts and the terms of these contracts, including the scope of work, payment, and duration of engagement, are fixed before the commencement of the projects. This creates some uncertainty for the Group by bringing many dynamic factors into play, such as labor shortages, higher than expected inflation, subcontractor defaults, and political interferences among others. Costs are generally increasing in the Construction industry because of inflation. McConnell Dowell is facing cost inflation the most in its projects that were awarded before FY'22. Construction projects are typically low-margin projects where any unexpected delays are likely to significantly impact profitability. McConnell Dowell uses several strategies at the tender and the project delivery stages to manage potential cost increases. The company also implemented a set of improved operational standards and governance procedures for all its projects and tenders, which led to the establishment of a Project Management Office ("PMO"). McConnell Dowell's PMO is led by a group of experienced professionals who directly report to McConnell Dowell's CEO. The PMO's role is to provide best practice support to the project management teams and ensure that all the projects are managed with full compliance with procedures. The implementation of improved operational standards and governance procedures is likely to mitigate the Group's business risk.

In the past, Aveng had to renegotiate several contracts and severed one of them as it realized the unviable contract terms over time. To mitigate these risks, the Group diversifies its projects across clients, geographies, and commodities, undertakes collaborative contract approaches such as alliances and early contract involvement and offers specialized services. Additionally, 83% of the Group's projects under McConnell Dowell are government projects leading to a lower level of credit and counterparty risk. Although these risks are unavoidable due to the nature of the business and cannot be eliminated completely, effective planning & leadership and proper management of the contracts could help reduce these risks down to a sustainable level.

Some of McConnell Dowell's contracts are alliance contracts and have cost reimbursement provisions. McConnell Dowell's contracts also have the rise and fall provision and some other provisions that allow it to pass price hikes on selected elements (such as steel) to its customers. It also has the flexibility to reprice most elements of work. However, we believe that despite these provisions the group companies are exposed to some level of input price volatility.

For the reasons stated above, we believe that the Group has a MODERATE business risk profile.

2. Financial Risk

Aveng's construction and mining businesses are capital-intensive in nature and require periodic investments in replacement and upgradation. Due to high operating losses from all its businesses from FY'14 to FY'20 and mounting deficits over the years, the Group has sold several unprofitable and cash-burning businesses. Although the Group has been able to reduce its leverage by using excess cash, renegotiating debt terms, and raising more equity, narrow margins in the industry might lead to challenges in raising additional capital to finance its CAPEX requirements, especially in this tightening monetary environment. Considering these factors, we believe that the Group has a MODERATE financial risk profile.

3. Political and Regulatory Risk

Australia generates over AUD 360 billion in revenue from the Construction industry and it contributes to over 9% of Australia's GDP.[xxxii] As a majority of McConnell Dowell's construction projects are located in Australia, the political and regulatory environment in the country is important for the growth of the industry. The industry is heavily regulated within the country with regulations at every level of the government. The industry plays a critical role in job creation and the economic growth of Australia. Supporting this, in July 2020, the Australian federal government announced a USD 1 billion funding package for shovel-ready smaller-scale projects in a bid to foster job creation. To promote the prospects of the industry, the government has undertaken various reforms including a more sustained level of federal infrastructure investment to underpin construction activity, greater project disaggregation to increase participation of mid-tier contractors, and the use of collaborative contracting by all tiers of government to reduce risk. These steps and reforms will support the industry's future growth and the companies that operate within the industry.

The revenue of Moolmans is directly influenced by the opportunities and the level of activity of the Mining industry in South Africa. South African mining laws are regulated by the Mineral and Petroleum Development Act and are administered by the Department of Mineral Resources. The country has in place several regulatory bodies and frameworks relating to environmental damage, pollution, ecological degradation, and sustainable operations. Although there is a plethora of applicable laws for the industry, the laws related to mining in the country are generally considered as accommodative, supporting public participation, and the environment. Considering this, we believe that the Group faces a LOW political and regulatory risk profile.

4. Economic Risk

Aveng is listed in South Africa but operates in several countries including Australia, New Zealand, Africa, and a minor presence in South-East Asian countries. The overall market sentiment is currently bearish due to Russia's invasion of Ukraine, rising oil prices, and surging inflation. Construction and mining activities are highly correlated with the overall health of the economy. Although the rise in the prices of construction materials and metals is a headwind for the Construction industry, it has helped to improve the prospects for the Mining and allied services industry. This is because as the prices of metals rise, the mining activity increases as the mines which were earlier reported to be unprofitable / unviable can now generate higher top-line numbers, giving room to accommodate high expenses.

The Construction and Mining industries were among the most affected by Covid. Being labor-intensive, the companies in these industries were affected due to a decline in workforce caused by the pandemic. Further, the imposition of lockdowns and movement restrictions by governments resulted in a sudden halt of all activities. McConnell Dowell's project Batangas LNG terminal in Philippines faced challenges during its initial days in 2020 because of Covid-related supply chain disruptions and restrictions on the movement of personnel and resources. As a result, the company had to initiate the project design remotely. The supply chain disruptions were compounded by the war in Ukraine. McConnell Dowell tried to negotiate some time relief on the Batangas LNG terminal project with FGEN LNG Corporation but was unable to obtain it from the client. Consequently, the client applied for maximum liquidated damages, which forced the company to report expenses of ZAR 1.2 billion in FY'23. These expenses include operating expenses incurred on the project to date, a provision for costs to complete the project, and additional expenditure arising from the project guarantee that had to be paid to the client. McConnell Dowell has entered into a separate rates-based services agreement with the client to fully commission the Batangas LNG project. Economic risk arising from supply chain disruptions, natural calamities, and unprecedented events like Covid-19 can have an adverse impact on the Group's business.

McConnell Dowell has implemented a turnaround plan for its Southeast Asia business division after Covid-19, which includes the appointment of a new MD to further strengthen its leadership team. Although the impact of Covid-19 has started to wear off and the activity is resuming to pre-pandemic levels, some uncertainty regarding further movement restrictions still remains with new variants emerging. Given the uncertain market conditions, we believe that the Group currently has a MODERATE economic risk profile.

Financial Analysis[i]

Revenue

Aveng's Total Revenue increased from ZAR 22,527 million in FY'22 to ZAR 28,865 million in FY'23, at a growth rate of 28.1%. Revenue from McConnell Dowell increased from ZAR 19,034 million in FY'22 to ZAR 25,950 million in FY'23, at a growth rate of 36.3%. McConnel Dowell's Revenue increased in FY'23 primarily because of growth in the company's Australian business unit. Revenue from Moolmans decreased from ZAR 3,349 million in FY'22 to ZAR 2,897 million in FY'23, which was a decrease of 13.5% YoY. The Group completed its long-term plan of disposing of all its non-core business units. The Group reported just ZAR 18 million in Revenue from Construction and Engineering: South Africa and Rest of Africa in FY'23. Going forward, we expect the Total Revenue to reach ZAR 39,690 million by FY'28.

Costs

Cost of Sales is the largest component of the cost for Aveng accounting for more than 90% of the Total Revenue in FY'22 and FY'23. Cost of Sales majorly comprised Payments to Sub-Contractors (44%), Employee Cost (18%), Cost of Materials (14%), Plant Costs (9%) and Project Costs (7%) in FY'23. In FY'23, the Group's Cost of Sales was ZAR 28,422, which accounted for 98.5% of the Total Revenue. In FY'23, McConnell Dowell's Cost of Sales was ZAR 25,552 million (98.5% of its Revenue) and Moolmans' Cost of Sales was ZAR 2,797 million (96.5% of its Revenue). Aveng's Cost of Sales as a percentage of Total Revenue increased from 92.1% in FY'22 to 98.5% in FY'23. The Cost of Sales increased from ZAR 20,749 in FY'22 to ZAR 28,422 in FY'23, an increase of 37.0%, primarily because of an increase in Sub-contractors costs, Employee Costs, Cost of Materials, Plant Costs, and Project Costs. McConnell Dowell also recognized ZAR 1,243 million in losses attributable to the BLNG project in Cost of Sales, which further increased the Group's Cost of Sales in FY'23. The next major cost for the Group is Operating Expenses which increased from ZAR 1,440 million in FY'22 to ZAR 1,610 million in FY'23, an increase of 11.8%. However, the Group's Operating Expenses as a percentage of Total Revenue decreased from 6.4% in FY'22 to 5.6% in FY'23. In the future we expect the Cost of Sales to decrease to 91.3% of the Total Revenue by FY'28, while Operating Expenses are expected to decrease from 5.6% of Total Revenue in FY'23 to 5.2% of Total Revenue by FY'28.

Profitability

Aveng reported a Loss of ZAR 1,283 million in FY'23. Aveng's Net Margin decreased from 0.6% in FY'22 to negative 4.4% in FY'23. The Group reported a Loss in FY'23 primarily because of an increase in its Cost of Sales which increased from ZAR 20,749 million in FY'22 to ZAR 28,422 million in FY'23 and also because of an increase in Exchange Differences on Translating Foreign Operations of ZAR 436 million. The Group's Gross Earnings as a percentage of the Total Revenue decreased from 7.9% in FY'22 to 1.5% in FY'23 because of an increase in the Group's Cost of Sales and the recognition of losses attributable to the BLNG project of ZAR 1,243 million. The Operating Earnings as a percentage of the Total Revenue have decreased from 1.6% in FY'22 to negative 3.7% in FY'23. From FY'24 to FY'28, we expect the Group to improve its profitability and reach a Gross Profit Margin of 8.7%, Operating Margin of 3.5%, and Net Margin of 2.6%.

Balance sheet

As of June 30, 2023, Aveng had Total Assets of ZAR 13,664 million, of which Current Assets were ZAR 8,480 million accounting 62.1% of the Total Assets. The major component of the Current Asset includes Cash and Bank Balance of ZAR 2,381 million and Contract Assets of ZAR 5,302 million. The Group has Non-

[i] Note: The Financials of the Group are reported of continuing operations for FY'23 and FY'22.

Current Assets worth ZAR 5,125 million which predominantly consists of Property, Plant and Equipment of ZAR 2,968 million. Since FY'18, Aveng has been focusing on decreasing its debt exposure. In FY'21 the Group decreased its debt by ZAR 1 billion. The Group's total debt as of June 30, 2023, is ZAR 1,020 million. The Group also holds Lease Liabilities amounting to ZAR 1,154 million.

Historical Income Statement

All figures in million South African Rands unless mentioned otherwise	2019	2020	2021	2022*	2023*
Revenue	**25,676**	**20,878**	**25,709**	**22,527**	**28,865**
YoY Growth %	*-16.0%*	*-18.7%*	*23.1%*	*-12.4%*	*28.1%*
Cost of sales	**(24,628)**	**(19,907)**	**(23,744)**	**(20,749)**	**(28,422)**
% of Total Revenue	*-95.9%*	*-95.3%*	*-92.4%*	*-92.1%*	*-98.5%*
Gross earnings	**1,048**	**971**	**1,965**	**1,778**	**443**
YoY Growth %	-41.7%	-7.3%	102.4%	-9.5%	-75.1%
Total Operating Expenses	**(2,247)**	**(1,647)**	**(1,675)**	**(1,440)**	**(1,610)**
% of Total Revenue	*-8.8%*	*-7.9%*	*-6.5%*	*-6.4%*	*-5.6%*
Other Earnings	110	163	268	27	109
Earning/(loss) from Equity-Accounted Investment	(30)	(19)	(22)	(5)	(2)
Net Operating (Loss)/Earnings	**(1,119)**	**(532)**	**536**	**360**	**(1,060)**
YoY Growth %	-	-	-	*-32.8%*	*0.0%*
% of Total Revenue	*-4.4%*	*-2.5%*	*2.1%*	*1.6%*	*-3.7%*
Other Expenses	90	(86)	868		
South African Government Settlement	-	-	-	-	-
Finance Earnings	181	32	19	8	77
Interest on Convertible Bonds	(63)	-	-	-	-
Finance Expenses	(524)	(461)	(394)	(152)	(200)
Capital Earnings / (Expenses)	-	-	-	(87)	9
Earnings / (Loss) Before Taxation	**(1,435)**	**(1,047)**	**1,029**	**129**	**(1,174)**
YoY Growth %	-	-	-	*-87.5%*	*0.0%*
% of Total Revenue	*-5.6%*	*-5.0%*	*4.0%*	*0.6%*	*-4.1%*
Taxation	(245)	(69)	(41)	(29)	57
% of Earnings Before Taxation	*17.1%*	*6.6%*	*4.0%*	*22.5%*	*4.9%*
Earnings / (Loss) from Continuing Operations	**(1,680)**	**(1,116)**	**988**	**100**	**(1,117)**
YoY Growth %	-	-	-	*-89.9%*	*0.0%*
% of Total Revenue	*-6.5%*	*-5.3%*	*3.8%*	*0.4%*	*-3.9%*
Earnings / (Loss) from Discontinued Operations	**-**	**-**	**-**	**30**	**(166)**
YoY Growth %	-	-	-	*0.0%*	*0.0%*
% of Total Revenue				*0.1%*	*-0.6%*
Earnings / (Loss) for the Period	**(1,680)**	**(1,116)**	**988**	**130**	**(1,283)**
YoY Growth %	-	-	-	*-86.8%*	*0.0%*
% of Total Revenue	*-6.5%*	*-5.3%*	*3.8%*	*0.6%*	*-4.4%*

**The financial data for 2022 and 2023 is of continuing operations.*

Historical Balance Sheet

All figures in million South African Rands unless mentioned otherwise	2019	2020	2021	2022*	2023*
ASSETS					
Non-Current Assets					
Goodwill arising on consolidation	100	100	100	100	100
Intangible assets	39	15	11	-	-
Property, plant and equipment	2,814	3,180	2,463	2,479	2,968
Right of use assets	-	-	337	606	489
Equity-accounted investments	45	35	30	-	-
Infrastructure investments	142	259	257	142	142
Derivative instruments	-	1	-	-	-
Deferred taxation	622	813	725	738	1,006
Lease receivables	-	-	38	73	400
Long-term receivables	-	43	-	16	20
Amounts due from contract customers	462	-	-	-	-
Total Non-Current Assets	**4,224**	**4,446**	**3,961**	**4,154**	**5,125**
Current Assets					
Inventories	214	187	211	1,028	262
Derivative instruments	-	9	-	-	-
Amounts due from contract customers	2,159	2,531	3,398	3,626	5,302
Trade and other receivables	194	358	327	837	427
Taxation receivable	43	41	37	60	27
Lease receivables	-	-	3	9	81
Cash and bank balances	1,605	1,755	2,519	2,617	2,381
Total Current Assets	**4,215**	**4,881**	**6,495**	**8,177**	**8,480**
Assets Held for Sale	**3,843**	**2,309**	**1,989**	**144**	**59**
TOTAL ASSETS	**12,282**	**11,636**	**12,445**	**12,475**	**13,664**
EQUITY AND LIABILITIES					
Equity					
Share capital and share premium	3,874	3,874	4,747	4,747	4,776
Other reserves	781	1,102	847	989	1,678
Retained earnings	(2,208)	(3,143)	(2,153)	(2,023)	(3,305)
Equity attributable to equity-holders of parent	**2,447**	**1,833**	**3,441**	**3,713**	**3,149**
Non-controlling interest	**7**	**7**	**7**	**7**	**6**
Total Equity	**2,454**	**1,840**	**3,448**	**3,720**	**3,155**
Liabilities					
Non-Current Liabilities					
Deferred taxation	86	166	152	121	218
Borrowings and other liabilities	1,450	1,313	856	229	504
Lease liabilities	-	-	-	773	854
Payables other than contract-related	115	104	94	94	86
Employee-related payables	245	330	338	377	446
Total Non-Current Liabilities	**1,896**	**1,913**	**1,440**	**1,594**	**2,108**
Current Liabilities					
Amounts due to contract customers	813	1,290	1,657	1,699	2,165
Borrowings and other liabilities	695	1,067	542	252	516
Lease liabilities	-	-	-	266	300
Payables other than contract-related	21	44	66	-	-
Employee-related payables	283	243	276	318	284
Derivative instruments	1	-	-	-	-
Provisons	-	-	-	451	420
Trade and other payables	2,683	2,764	3,441	4,149	4,716
Bank overdrafts	-	424	-	-	-
Taxation Paybale	-	-	-	10	-
Total Current Liabilities	**4,496**	**5,832**	**5,982**	**7,145**	**8,401**
Liabilities Held for Sale	**3,436**	**2,051**	**1,575**	**16**	**-**
Total Liabilities	**9,828**	**9,796**	**8,997**	**8,755**	**10,509**
TOTAL LIABILITIES AND SHAREHOLDER'S EQUITY	**12,282**	**11,636**	**12,445**	**12,475**	**13,664**

**The financial data for 2022 and 2023 is of continuing operations.*

Income Statement Summary – Our Estimated Projections

All figures in million South African Rands unless mentioned otherwise	2024P	2025P	2026P	2027P	2028P
Revenue	**32,089**	**33,836**	**35,681**	**37,630**	**39,690**
YoY Growth %	*11.2%*	*5.4%*	*5.5%*	*5.5%*	*5.5%*
Gross earnings	**2,324**	**2,574**	**2,843**	**3,135**	**3,450**
YoY Growth %	*424.7%*	*10.7%*	*10.5%*	*10.3%*	*10.1%*
% of Total Revenue	*7.2%*	*7.6%*	*8.0%*	*8.3%*	*8.7%*
Net Operating (Loss) / Earnings	**495**	**689**	**901**	**1,133**	**1,386**
YoY Growth %	*-*	*39.0%*	*30.8%*	*25.8%*	*22.4%*
% of Total Revenue	*1.5%*	*2.0%*	*2.5%*	*3.0%*	*3.5%*
Earnings / (Loss) Before Taxation	**211**	**425**	**656**	**897**	**1,160**
YoY Growth %	*-*	*101.1%*	*54.3%*	*36.8%*	*29.3%*
% of Total Revenue	*0.7%*	*1.3%*	*1.8%*	*2.4%*	*2.9%*
Earnings / (Loss) for the Period	**147**	**349**	**566**	**775**	**1,021**
YoY Growth %	*-*	*137.0%*	*62.4%*	*36.8%*	*31.8%*
% of Total Revenue	*0.5%*	*1.0%*	*1.6%*	*2.1%*	*2.6%*

Balance Sheet – Our Estimated Projections

All figures in million South African Rands unless mentioned otherwise	2024P	2025P	2026P	2027P	2028P
ASSETS					
Non-Current Assets					
Goodwill Arising on Consolidation	100	100	100	100	100
Property, Plant, and Equipment	3,274	3,453	3,604	3,763	3,891
Right of use Assets	489	489	489	489	489
Infrastructure Investments	142	142	142	142	142
Deferred Taxation	1,006	1,006	1,006	1,006	1,006
Lease Receivables	400	400	400	400	400
Other Non-Current Assets	20	20	20	20	20
Total Non-Current Assets	**5,431**	**5,610**	**5,761**	**5,920**	**6,048**
Current Assets					
Inventories	274	300	315	331	348
Amounts due from Contract Customers	5,275	5,284	5,474	5,722	6,089
Trade and Other Receivables	615	649	684	722	761
Taxation Receivable	27	27	27	27	27
Lease Receivables	81	81	81	81	81
Cash and Bank Balances	1,502	1,607	1,856	2,237	2,862
Total Current Assets	**7,775**	**7,947**	**8,438**	**9,120**	**10,168**
Assets Held for Sale	-	-	-	-	-
TOTAL ASSETS	**13,206**	**13,557**	**14,199**	**15,040**	**16,216**
EQUITY AND LIABILITIES					
Equity					
Stated Capital	4,776	4,776	4,776	4,776	4,776
Other Reserves	1,678	1,678	1,678	1,678	1,678
Accumulated Losses	(3,158)	(2,809)	(2,243)	(1,468)	(447)
Equity Attributable to Equity-Holders of Parent	**3,296**	**3,645**	**4,211**	**4,986**	**6,007**
Non-Controlling Interest	6	6	6	6	6
Total Equity	**3,302**	**3,651**	**4,217**	**4,992**	**6,013**
Liabilities					
Non-Current Liabilities					
Deferred Taxation	218	218	218	218	218
Borrowings and Other Liabilities	504	504	504	504	504
Lease Liabilities	854	854	854	854	854
Provision	86	86	86	86	86
Employee-Related Payables	446	446	446	446	446
Total Non-Current Liabilities	**2,108**	**2,108**	**2,108**	**2,108**	**2,108**
Current Liabilities					
Amounts due to contract customers	2,202	2,141	2,159	2,079	1,986
Borrowings and other liabilities	226	226	226	226	226
Lease liabilities	300	300	300	300	300
Employee-related payables	326	257	270	284	298
Provisons	420	420	420	420	420
Trade and other payables	4,322	4,454	4,498	4,631	4,865
Total Current Liabilities	**7,796**	**7,798**	**7,873**	**7,940**	**8,095**
Liabilities Held for Sale	-	-	-	-	-
Total Liabilities	**9,904**	**9,906**	**9,981**	**10,048**	**10,203**
TOTAL LIABILITIES AND SHAREHOLDER'S EQUITY	**13,206**	**13,557**	**14,199**	**15,040**	**16,216**

Valuation

Equity Value of Aveng Group Limited stands between **ZAR 3.7 billion and ZAR 4.6 billion**

Equity Value per share for AEG stands between **ZAR 29.30 and ZAR 35.81**

(All figures in ZAR million)

Valuation Approach	Variance	Equity Value as on 15-Nov-23	Price per Share (ZAR)
Downside Case	-10%	3,725	29.30
Base Case	0%	4,139	32.55
Upper Case	10%	4,552	35.81

Important information on Arrowhead methodology

The principles of the valuation methodology employed by Arrowhead BID are variable to a certain extent, depending on the sub-sectors in which the research is conducted. But all Arrowhead valuation research possess an underlying set of common principles and a generally common quantitative process.

With Arrowhead commercial and technical due diligence, Arrowhead researches the fundamentals, assets and liabilities of a company, and builds estimates for revenue and expenditure over a coherently determined forecast period.

Elements of past performance such as price/earnings ratios, indicated as applicable, are mainly for reference. Still, elements of real-world past performance enter the valuation through their impact on the commercial and technical due diligence.

We have presented the Discounted Cash Flow ("DCF") estimate approach for Free Cash Flow to Firm ("FCFF") valuation.

Arrowhead BID Fair Market Value Bracket

The Arrowhead Fair Market Value is given as a bracket. This is based on quantitative key variable analyses such as key price analysis for revenue and cost drivers or analysis and discounts on revenue estimates for projects, especially relevant to projects estimated to provide revenue near the end of the chosen forecast period. Low and high estimates for key variables are produced as a valuation tool.

In principle, an investor comfortable with the high brackets of our key variable analysis will align with the high bracket in the Arrowhead Fair Value Bracket, and, likewise, in terms of low estimates. The investor will also note the company intangibles to analyze the strengths and weaknesses, and other essential company information. These intangibles serve as supplementary decision factors for adding or subtracting a premium in investor's own analysis.

The bracket should be taken as a tool by Arrowhead BID for the reader of this report and the reader should not solely rely on this information to make his decision on any particular security. The reader must also understand that while on the one hand global capital markets contain inefficiencies, especially in terms of information, on the other, corporations and their commercial and technical positions evolve rapidly. This present edition of the Arrowhead valuation is for a short to medium-term alignment analysis (one to twelve months).

See important disclosures on page 49 of this report.

Estimation of Equity Value

Value of Aveng Limited's equity has been arrived at using a blend of Discounted Cash Flow ("DCF") and Comparable Company Analysis valuation methodology. We have conducted the Listed Comparable Analysis using 2023 financials for two different sets of competitors for McConnell Dowell and Moolmans based on business and geographies. The results have been summarized in the table below.

(All figures in ZAR millions)

Listed Comparable Analysis	Equity Value as on 15-Nov-23	Price per share (ZAR)	Weights (%)
Listed Company Analysis	4,986	39.21	20%
DCF Valuation	3,927	30.89	80%
Weighted Average Equity Value	**4,139**	**32.55**	**100%**

1. Listed Company Analysis / Comparable Company Analysis ("CCA")

Listed Comparable Analysis method operates under the assumption that similar companies will have similar valuation multiples such as EV/EBITDA, P/E, and EV/Gross Profits. We have shortlisted companies similar in business with Aveng based on parameters such as products and services, geography etc.

A list of available statistics for the companies was compiled, and EV/EBITDA, P/E, and EV/Gross Profits multiples were calculated for each of the comparable companies for 2023. Since most of the data was not normalized, we have left outliers in our calculations. The weighted average of the resulting multiples was then calculated and used as benchmark for valuing Aveng.

The weights allocated to the comparable companies were based on the degree of their business match with the subject Company.

(All figures in ZAR millions)

Relative Valuation based on:	Weights	Implied Enterprise Value as on 15-Nov-23	Implied Equity Value as on 15-Nov-23	Price per Share (ZAR)
EV / EBITDA	33%	5,603	5,804	45.65
P / E	33%	5,956	6,157	48.43
EV / Gross Profits	34%	2,853	3,054	24.02
Weighted Average	**100%**		**4,986**	**39.21**

A. McConnell Dowell

(All figures in ZAR millions)

Relative Valuation based on:	Multiple	Implied Enterprise Value as on 15-Nov-23	Implied Equity Value as on 15-Nov-23
EV/EBITDA*	6.0	4,773	-
P/E*	13.2	-	6,157
EV/Gross Profits	3.3	2,316	-

**Losses attributable to the BLNG project of ZAR 1,243 million have been added back to calculate values from EBITDA and Net Profit multiples*

Stock Exchange	Ticker	Company Name	Business Match %	EV/EBITDA	P/E	EV/Gross Profits
Johannesburg Stock Exchange	MUR	Murray & Roberts Holdings Limited	90%	NM	NM	0.4
Johannesburg Stock Exchange	RBX	Raubex Group Limited	60%	2.1	5.3	1.9
Johannesburg Stock Exchange	WBO	Wilson Bayly Holmes-Ovcon Limited	70%	4.3	9.5	0.3
Australian Securities Exchange	NWH	Nrw Holdings Limited	85%	4.6	13.3	3.8
Australian Securities Exchange	SRG	Srg Global Limited	80%	NM	15.4	3.9
Australian Securities Exchange	CVL	Civmec Limited	65%	6.8	6.9	6.4
Australian Securities Exchange	MND	Monadelphous Group Limited	65%	13.9	27.7	10.9
Australian Securities Exchange	DCG	Decmil Group Limited	55%	4.7	14.3	1.6
Australian Securities Exchange	DOW	Downer Edi Limited	55%	47.7	NM	2.4
Bolsas y Mercados Espanoles	ANA	Acciona SA	50%	5.4	11.7	1.5
Median				**5.1**	**12.5**	**2.2**
Mean without Outliers				**6.0**	**13.0**	**3.1**
Weighted Average Without Outliers				**6.0**	**13.2**	**3.3**
Johannesburg Stock Exchange	**AEG**	**Aveng Limited**		**NM**	**NM**	**NM**

B. Moolmans

(All figures in ZAR millions)

Relative Valuation based on:	Multiple	Implied Enterprise Value as on 15-Nov-23	Implied Equity Value as on 15-Nov-23
EV/EBITDA	2.5	830	-
P/E	8.6	-	-
EV/Gross Profits	1.0	537	-

Stock Exchange	Ticker	Company Name	Business Match %	EV/EBITDA	P/E	EV/Gross Profits
Australian Securities Exchange	PRN	Perenti Global Limited	80%	0.3	1.8	7.5
OTC Markets	CILLF	Capital Limited	70%	2.3	1.5	6.5
Australian Securities Exchange	MAH	Macmahon Holdings Limited	85%	1.8	0.4	5.6
Australian Securities Exchange	MLG	Mlg Oz Limited	80%	3.8	0.5	86.6
Euronext Lisbon	EGL	Mota Engil Sgps Sa	60%	2.2	0.8	16.8
Median				**2.2**	**7.5**	**0.8**
Mean without Outliers				**2.5**	**9.1**	**1.0**
Weighted Average Without Outliers				**2.5**	**8.6**	**1.0**
Johannesburg Stock Exchange	**AEG**	**Aveng Limited**		**NM**	**NM**	**NM**

2. Discounted Cash Flow ("DCF") Approach used for

- **Valuation Methodology:** The Arrowhead fair valuation for Aveng is based on the Discounted Cash Flow analysis using Free Cash Flows to Firm ("FCFF").
- **Time Horizon:** The time period selected for valuation is 5 years (2024 – 2028).

The following table calculates the weighted average cost of capital of Aveng. The expected return on the market is assumed for the broader market.

Weighted Average Cost of Capital

Valuation	
Risk Free Rate (Rf)	10.4%
Beta	0.8
Equity Risk Premium	10.4%
Cost of Equity	**17.6%**
Interest on Loan	14.0%
Assumed Weight-Debt	25%
Assumed Weight-Equity	75%
WACC	**16.7%**

The following table summarizes the FCFF computation for Aveng, which is subsequently discounted by the Weighted Average Cost of Capital ("WACC").

FCFF *(All figures in ZAR millions)*

	2024	**2025**	**2026**	**2027**	**2028**
Net Income	147	349	566	775	1,021
Add: Depreciation and Amortization Expense	818	881	924	965	1,003
Add: Interest Expense x (1-Tax Rate)	205	190	176	170	163
Less: CAPEX	1,124	1,059	1,076	1,124	1,131
Less: Increase in Net Working Capital	489	66	165	235	269
Free Cash Flow to Firm (FCFF)	**(444)**	**295**	**426**	**551**	**787**
Terminal Value					**5,923**
Present Value of Free Cash Flow to Firm (FCFF)	**(380)**	**216**	**268**	**297**	**364**
Present Value of Terminal Value					**2,738**

Valuation	
Equity Value as on 30-Jun-23 (ZAR millions)	**3,704**
Equity Value as on 15-Nov-23 (ZAR millions)	**3,927**
Number of Shares Outstanding (in millions)	127
Value per Share (ZAR)	**30.89**

Analyst Certifications

We, Karan Mehta and Aditya Ahluwalia, certify that all of the views expressed in this research report accurately reflect our personal views about the subject security and the subject company, based on the collection and analysis of public information and public company disclosures.

Important disclosures

Arrowhead Business and Investment Decisions, LLC received fees in 2022 and will receive further fees in 2023 from Aveng Limited for researching and drafting this report and for a series of other services to Aveng Limited, including distribution of this report, investor relations and networking services. Neither Arrowhead BID nor any of its principals or employees own any long or short positions in Aveng Limited. Arrowhead BID's principals intend to seek a mandate for investment banking services from Aveng Limited in 2023 or beyond and may receive compensation for investment banking services from Aveng Limited in 2023 or beyond.

Aside from certain reports published on a periodic basis, the large majority of reports are published by Arrowhead BID at irregular intervals as appropriate in the analyst's judgment.

Any opinions expressed in this report are statements of our judgment to this date and are subject to change without notice.

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Appendix

Glossary

OEM	Original Equipment Manufacturers
ESG	Environmental Social and Governance
LTIFR	Lost Time Injury Frequency Rate
TRIFR	Total Recordable Injury Frequency Rate
CAGR	Compounded Annual Growth Rate
EV	Electrical Vehicle
E&C	Engineering and Construction
PMO	Project Management Office

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