Cement Manufacturing Plant:

Kahama Municipality - Tanzania

Business Plan:

March 2021

Foreword

Terms of Reference

This is a working document setting out Prime Cement Limited Tanzania (PCL) business plan underpinning its mission of investing in cement manufacturing to contribute to the economic development and urbanization of Tanzania. In its endeavour to achieve this mission, PCL through this business initiative is committed to work in environment friendly methods through its modern Cement production line similar to the one being installed as **Phase II** at its sister plant in Musanze, Rwanda. PCL is also committed to supply Tanzania and neighbouring countries with reliable and high quality cement to support the development projects in the region and the country industrialisation agenda.

This Business Plan shall be utilized in the following ways:

- Draws the strategic direction and business plans of the new cement manufacturing plant of PCL in Tanzania;
- A bankable document for financing purposes enabling PCL to communicate with financial institutions;
- A reference business document providing quality information for decision-making by those directly involved in the Project success. These include among Tanzania Investment Centre (TIC) and other government institutions involved in a number of approvals of the Project; and
- Provides documentation that the business venture was thoroughly investigated.

Disclaimer

Ossy & Williams Associates (T) Limited, as business advisors with experts in Corporate Finance Services (CFS), have prepared this Business Plan, solely for use by Prime Cement Limited and its associates (herein referred, as (PCL), for the purpose of construction and operating a cement manufacturing plant in Tanzania. The information and opinions contained in this report have been compiled, arrived at or derived from data and information obtained from PCL and other publicly available sources. We have not independently verified or audited the contents of the data/information.

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Confidentiality

This document is confidential and should not be released to, nor relied upon by, any person or third party not directly related to Prime Cement Limited without the explicit written consent of the authorised representatives of the Company.

Sources of Information

- Bank of Tanzania www.bot.go.tz
- IFC - International Finance Corporation
- IMF – World Economic Outlook Database
- National Bureau of Statistics www.nbs.go.tz
- Tanzania Investment Center (TIC), www.tic.go.tz
- Various documents (Budget, PCL Payroll, Plant Layout drawings at Musanze, Rwanda, etc.)
- https://www.globalcement.com/news/itemlist/tag/Tanzania

Key Definitions

Terminology	*Brief meaning/definition*
22.5 Grade X Cement	Pozzolanic cement containing 40% clinker, 55% pozzolana, and 5% gypsum.
Beta	A ratio that measures the risk or volatility of a company's share price in comparison to the market as a whole. A beta of 1.0 means that that the company rises and falls in direct relationship to the movement of the benchmark index. A beta that is less than 1 indicates a stock that is less volatile than the overall market and a beta greater than 1 indicates that the stock is more volatile.
Capital Assets Pricing Model (CAPM)	CAPM describes the relationship between systematic risk and expected return for assets, particularly stocks. CAPM is widely used throughout finance for pricing risky securities and generating expected returns for assets given the risk of those assets and cost of capital. $$ER_i = R_f + \beta_i(ER_m - R_f)$$ Where: ER_i = Expected return of investment R_f = Risk-free rate β_i = Beta of the investment $(ER_m - R_f)$= market risk premium
CEM II 42.5	Pozzolanic cement containing 75% clinker, 20% pozzolana, and 5% gypsum.
CEM IV 32.5	Pozzolanic cement containing 45% clinker, 50% pozzolana, and 5% gypsum.
Cement	Construction material made by grinding a mixture of clay and limestone. Depending on its capability to set in the presence of water, it is categorized as hydraulic and non-hydraulic. Non-hydraulic cement reacts with the carbon dioxide in the environment to set and offers optimal resistance against chemicals. On the other hand, hydraulic cement hardens quickly due to a chemical reaction between water and the dry ingredients.
Clinker	Dark grey nodular material made by heating ground limestone and clay at a temperature of about 1400 °C - 1500 °C. The nodules are ground up to a fine powder to produce cement, with varying amounts of gypsum and pozzolana to produce different grades of cement.
Grinding	Process whereby the raw materials for cement production (clinker, pozzolana, and gypsum) enter the mill by the inlet chute. The chute enters the mill on one side of the mill housing, placing the materials on the centre of the grinding table.
Gypsum	Mineral consisting of hydrated calcium sulphate. It occurs in sedimentary deposits and is used to make plaster board for the building industry. Gypsum plays a very important role in controlling the rate of hardening (or “setting process”) of the cement
ISO 14000	A series of international environmental management standards, guides, and technical reports. The standards specify requirements for establishing an environmental management policy, determining environmental impacts of products or services, planning environmental objectives, implementing programs to

	meet objectives, and conducting corrective action and management review.
ISO 9001 – 2015	An international standard dedicated to Quality Management Systems (QMS). It outlines a framework for improving quality and a vocabulary of understanding for any organization looking to provide products and services that consistently meet the requirements and expectations of customers and other relevant interested parties in the most efficient manner possible. The QMS is the aggregate of all the processes, resources, assets, and cultural values that support the goal of customer satisfaction and organizational efficiency. First published in 1987, the latest iteration (ISO 9001:2015) replaces ISO 9001:2008.
Pozzolana	Natural siliceous or siliceous-aluminous material, which reacts with calcium hydroxide in the presence of water at room temperature (cf. pozzolanic reaction). In this reaction insoluble calcium silicate hydrate and calcium aluminate hydrate compounds are formed possessing cementitious properties.
Pozzolanic cements	Mixtures of portland cement and a pozzolanic material that may be either natural or artificial. The natural pozzolanas are mainly materials of volcanic origin but include some diatomaceous earths.
Terminal Value (TV)	This is the value of a business or project beyond the forecast period when future cash flows can be estimated. Terminal value assumes a business will grow at a set growth rate forever after the forecast period. Terminal value often comprises a large percentage of the total assessed value.

About the Consultant

Ossy & Williams Associates (T) Limited, a consulting firm, registered in Tanzania, providing a wide range of business advisory services across many sectors of the economy in Tanzania and neighbouring countries with main focus in Corporate Finance Services.

Our advisory services include: Business Plan development, business/share valuations, due diligence, public financial management, corporate finance, project management, human resources management, organisational design and review, financial modelling, M&E and delivery of various tailor made capacity building trainings focusing on banking, investment analysis, portfolio management and corporate governance.

The firm has amassed huge experience in crosscutting disciplines in various sectors of the economy and we are always able to respond quickly to clients' requests with customised business solutions.

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List of Acronyms

BOT	Bank of Tanzania
BRELA	Business Registration and Licensing Authority
CAGR	Cumulative Annual Growth Rate
CAPEX	Capital Expenditure
CAPM	Capital Asset Pricing Model
CCR	Central Control Room
CEO	Chief Executive Officer
CO_2	Carbon dioxide
DCF	Discounted Cash Flow
DRC	Democratic Republic of Congo
EAC	East African Community
EP	Engineering and Procurement
EPC	Engineering, Procurement, Construction
FTE	Full Time Employee
GDP	Gross Domestic Product
HRM	Human Resources Manager
HSSE	Health, Security, and Social Environment
IDC	Interest During Construction
IMF	International Monetary Fund
IRR	Internal Rate of Return
ISO	International Standard Organisation
LPG	Liquefied Petroleum Gas
NBS	National Bureau of Statistics
NPL	Non Performing Loans
NPV	Net Present Value
PBP	Pay Back Period
PCL	Prime Cement Limited
PM	Plant Manager
PPE	Property, Plants and Equipment
ROI	Return on Investment
SADC	Southern Africa Development Community
SEA	Social and Environmental Impact Assessment
SGR	Standard Gauge Railway
SWOT	Strength, Weakness, Opportunity, Threat
T/Y	Tons per Year
TDB	Trade Development Bank
TDV	Tanzania Development Vision 2025
TIC	Tanzania Investment Centre
TPCC	Tanzania Portland Cement Company

TV	Terminal Value
TZS	Tanzania Shilling
UAE	United Arab Emirates
US$	Unites States Dollar
VAT	Value Added Tax
WACC	Weighted Average Cost of Capital

Executive Summary

Introduction

Prime Cement Limited (herein referred to as "PCL") is a private limited company incorporated under Section 435 of the Companies Act, 2002 on 13th January 2021, with **Certificate of Compliance No: 149340955**, (See Annex 1) with the purpose of constructing and operating a cement manufacturing company.

PCL plans to set up a cement plant with 835,000 tons per year capacity (115T/hour), to engage in the business of manufacturing and trade of cement. The company has acquired relevant cement production license as well as obtained approval for the investment from the Government of Tanzania through the Ministry of Industry and Trade. The company is in the process of securing 100 acres of land in Kahama Municipality, Shinyanga region, Tanzania for the purpose of accommodation of the plant complex and any other structures and infrastructures that will be required for a modern cement manufacturing plant. The land is strategically located about 100km from Shinyanga municipality, 570km from Dodoma, which is the capital of the country and with some few mega projects as summarised in the market analysis section and it is 450km from Kigali City (580Km from the Pozzolana mine, located in the Northern Province).

The main advantage of the location is that it will enable PCL (Tanzania) to import pozzolana from the sister company in Rwanda. The Group currently has thirteen licenses for mining pozzolana covering 245 hectares with estimated volumes of pozzolana up to 32 million tons. These reserves are estimated reserves are estimated time to reach depletion after 157 years. Clinker will be imported through Tanga Port, which is only 1,000 km from Kahama Municipality.

Major markets for the pozzolanic cement that will be produced by Prime Cement Tanzania include countries in the East African Community (EAC) namely: (Kenya, Uganda, Tanzania, Rwanda, Burundi and South Sudan). With 1435 mm (4 ft. 8.5 in) railway line, which is intended to ease the transfer of goods between the port of Dar es Salaam and the city of Kigali, and subsequently to Bujumbura in Burundi and to Goma in the Democratic Republic of the Congo makes the location of the plant to be even more strategic. Raw materials, specifically clinker, would travel to Isaka from Dar es Salaam on the Standard Gauge Railway (SGR) line, which is currently under construction from Dar es Salaam to Mwanza. The further plan would be transport cement to reach other markets in the region.

The promoters of PCL Tanzania are currently operating a similar plant with 600,000 ton per year-installed capacity located in Musanze, Northern Province of Rwanda. The project is located 8 km from Musanze Town, the province capital, which is just over 20 km to the Ugandan border and is also one and a half hours away from the DRC Boarder (Gisenyi/Goma). Currently the Rwanda Plant has been able to not only tap into the Rwandan market, but also the neighbouring exports markets in DRC and South Western Uganda.

This business plan sets out the project cost benefit analysis, financing structure and projected cash flows for the next seven-year period, which is presumed as financing structure period. The plan provides a roadmap for the project implementation and will assist the company to obtain necessary support and endorsements sought from relevant government authorities for the development of the project. After engaging several equipment vendors, Prime Cement Ltd will selected one of the best EPC and Turnkey suppliers of machinery for cement plant in the world with experience with East Africa market.

This report and the accompanying annexures are for the internal use of PCL and its advisors for the envisaged transport business. This report is not to be published or referred to, in whole or in part, in connection with any other purposes other than those specified in the preceding paragraphs above without any express consent of the PCL.

Main Findings

- In 2020, Tanzania industry and construction activities, which include mining and quarrying, manufacturing, construction, electricity and gas supply, as well as water supply and sewage, grew by 11.8 percent in 2019

compared with 9.7 percent in 2018.[1] Construction, which contributed 27.5 percent of GDP, grew by 14.1 percent in 2019, mainly associated with on-going infrastructural projects including: Standard Gauge Railway (SGR); Ubungo interchange; construction and expansion of ports, airports, roads and bridges; and building of ships and ferries in major lakes.[2]

- The Tanzania economy continued to be among the fastest growing economies in sub-Saharan Africa. According to Bank of Tanzania 2019/2020 report, in 2019, the economy performed strongly with a real Gross Domestic Product (GDP) growth of 7.0 percent as projected and same as in 2018. The main growth drivers were **construction**, agriculture, mining and quarrying, and **transport** and storage activities. The fastest growth rates were registered in mining and quarrying, construction, transport and storage, and administrative and support services. Agricultural activity accounted for the largest share of GDP at 26.5 percent followed by construction (14.3 percent), trade and repair (8.8 percent) and manufacturing (8.5 percent).

- Headline inflation remained subdued, below the country medium-term target of 5.0 percent, and East African Community (EAC) and Southern African Development Community (SADC) convergence criteria of not more than 8.0 percent and 3.0 to 7.0 percent, respectively. This was largely due to stability of the exchange rate, subdued oil prices in the world market amid challenges posed by COVID-19 outbreak, and implementation of prudent monetary and fiscal policies. Headline inflation averaged 3.5 percent in 2019/20 compared with 3.2 percent in the preceding year. The increase was on account of food inflation, which rose to an average of 4.8 percent from 1.3 percent in 2018/19. Core inflation—inflation that excludes food and energy prices—averaged 2.4 percent compared with 2.8 percent in the preceding year

- Inflation is projected to remain low and below the medium-term target of 5.0 percent in 2020/21; supported by expected adequate food supply in the country, adequate power supply, low energy prices in the world market, coupled with prudent monetary and fiscal policies.

- The East African Community (EAC) recorded real GDP growth of 5.9 per cent in 2019, slower than the 6.6 per cent growth in 2018, with the deceleration cutting across most member countries. GDP growth in Uganda was 4.9 per cent in 2019 compared to 6.1 per cent in 2018, while Tanzania's was 6.3 per cent compared to seven per cent in 2018. Burundi recorded an improvement from 1.6 per cent in 2018 to 1.8 per cent in 2019. Rwanda recorded the highest GDP growth rate of 10.1 per cent, supported by both the private and public sector. Kenya's GDP growth is estimated at 5.4 per cent in 2019 compared to 6.3 per cent in 2018, with growth more pronounced in service-oriented sectors.

[1] Bank of Tanzania, Annual Report (2019/20, pg. 10)
[2] Ibid

Project Synopsis

Products:

CEM IV/B (P) 32.5 N
CEM II/A-P 42.5 N
MASONRY 22.5 X

Nominal Capacity:	115T/H
Machinery's Country of Origin:	TBD
Machinery Supplier:	TBD
Location:	Kahama Municipality
Premises Area	61.15ha.
Number of Employees	135 FTE

Project's Overall Cost (US$ '000):	
Land & Site Development	$2,000
EP + Transportation	$20,000
Civil Construction, Erection and Installation, Commissioning	$37,000
Pre-Operational Expenses & Initial Working Capital	$3,500
Interest during construction	$2,205

Capital Structure (US$' 000):	**$64,705**
Equity (35%)	$22,705
Debt (65%)	$42,000

Equity Shareholders:

Millennial Group Ltd	100%

Annual Performance

Year	2023	2024	2025	2026	2027	2028
Projected Capacity Utilisation:	55%	85%	95%	95%	95%	95%
Domestic market	80%	80%	80%	80%	80%	80%
Export Market	20%	20%	20%	20%	20%	20%
Projected Product Price ($/t)						
CEM IV/B (P) 32.5 N	$131	$131	$131	$131	$131	$131
CEM II/A-P 42.5 N	$142	$142	$142	$142	$142	$142
MASONRY 22.5 X	$95	$95	$95	$95	$95	$95
($' 000)	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Revenue	63,958	98,845	110,473	110,473	110,473	110,473
Other Income	-	-	-	-	-	-
Total Revenue	**63,958**	**98,845**	**110,473**	**110,473**	**110,473**	**110,473**
Cost of Sales	(43,620)	(66,801)	(74,540)	(74,558)	(74,576)	(74,595)
Gross Profit	**20,338**	**32,043**	**35,933**	**35,915**	**35,897**	**35,879**
GP Margin	*32%*	*32%*	*33%*	*33%*	*32%*	*32%*
Operating Expenses ($' 000)						
General & Admin.	(1,716)	(1,687)	(1,613)	(1,515)	(1,414)	(1,310)
Maintenance Costs	(640)	(1,038)	(1,218)	(1,279)	(1,343)	(1,410)
Total OPEX	**(2,356)**	**(2,724)**	**(2,831)**	**(2,794)**	**(2,757)**	**(2,720)**
EBITDA	**17,982**	**29,319**	**33,102**	**33,121**	**33,140**	**33,159**
Depreciation charge	(6,471)	(6,471)	(6,471)	(6,471)	(6,471)	(6,471)
EBIT	**11,512**	**22,848**	**26,631**	**26,650**	**26,669**	**26,688**
Finance Costs (Interest and charges)	(2,415)	(2,062)	(1,691)	(1,300)	(889)	(456)
Profit before tax (PBT)	**9,097**	**20,786**	**24,941**	**25,350**	**25,781**	**26,232**
Corporate tax	(3,755)	(7,262)	(8,508)	(8,631)	(8,760)	(8,896)
Net Profit/(Loss) after tax	**$5,342**	**$13,524**	**$16,432**	**$16,719**	**$17,020**	**$17,337**
Key Ratios:						
EBITDA % income	28%	30%	30%	30%	30%	30%
EBIT % income	18%	23%	24%	24%	24%	24%
Profitability Ratio (%)	8%	14%	15%	15%	15%	16%
DSCR Ratio (times)	**1.64**	**2.77**	**3.25**	**3.40**	**3.56**	**3.75**
Interest Cover (times)	26.5	47.9	65.3	85.0	124.3	242.4
Gross Profit Margin	32%	32%	33%	33%	32%	32%
Current Ratio	2.8	4.9	7.4	10.3	13.2	16.1
Return on Equity (%	19%	33%	28%	22%	19%	16%

Economic Analysis (Base Case)

Payback Period:	5.5 Years
ROI, Return on Investment:	19.1%
IRR, Internal Rate of Return:	28.8%
NPV is positive	➢ 0
	$26,656,672

- In reaching the conclusion of project's feasibility, we considered the Discounted Cash Flow approach.
- PCL has the ability and potential to generate adequate cash flows and achieving sustainable profitability.

Sensitivity Analysis

	Scenario	
	Base Case	Pessimistic
NPV ($' 000)	> 0 $26,657	> 0 $22,540
IRR	28.8%	27.2%
Payback Period (years)	5.50	5.58
ROI	19.1%	17.8%

- Given that production is a function of demand of cement, the pessimistic scenario assumes drop in plant capacity utilisation by 15%, 10%, and 5% in 2023, 2024, and 2025 respectively because of slower market recovery from Covid-19.
- The economic analysis of the tested scenario shows the project resilience in generating adequate cash flows to cover the debt service over the loan life span.

Conclusion

- The project will generate adequate cash to pay the annual debt service of the intended loan as evidenced by the leverage ratio and other key financial indicators summarised above.
- Venturing into investment in a cement manufacturing plant in Kahama Municipality, Tanzania is a worthy strategy to establish an early comer stronghold serving a vast market of high potential in the East African Community market, and specifically those around Kahama (given its centrality to potential construction projects in the region).
- Covering neighbouring countries of Rwanda, Burundi, Uganda and Democratic Republic of Congo (DRC) will enable PCL to be sustainable on first operating year and profitable during the same year (at base case scenario). Therefore, arranging a resourceful logistical framework with domestic and regional shippers for raw materials (pozzolana from a mine operated by sister company) and clinker to be sourced from long-term suppliers of same materials to PCL Rwanda is key to assure business continuity and development.
- Through PCL Rwanda, we have experience in the market and trust that with the superior quality of cement that we will be producing our cement will remain competitive; and
- Implementing the key success factors shall reduce considerable risks and increase the project viability.

Project Overview

The Founders

The Prime Cement Tanzania ("the Project") is the first business initiative of Milbridge Holding in Tanzania. Milbridge Holding owns several businesses in the manufacturing and trade of construction materials in several countries in Africa and the Middle East (United Arab Emirates). In Africa the Group has businesses in Angola, South Africa and Rwanda. Among the companies under Milbridge Holding Group include Prime Cement Limited, a plant with installed capacity of producing 600,000 T/Y of Cement with two main products, namely: CEM IV 32.5 and CEM II 42.5. The plant sells its products both in bags and in bulk.

The Cement project in Tanzania aims at producing 835,000T/Y[3] of Cement. It intends to retain same products but introduce 22.5 Grade X, which the company reckons that this product will win the Tanzania market especially on medium size real estate projects.

Prime Cement Limited (hereinafter referred to as "PCL") is a private limited company incorporated under Section 435 of the Companies Act, 2002 on 13th January 2021, **with Certificate of Compliance No: 149340955** (Annex 1) with the main object of producing, marketing and selling of cement in Tanzania.

PCL is a registered limited company with one (1) shareholder:

- Millennial[4] Group Ltd: 100%

The founders of PCL represented by Millennial Group Ltd, which holds Certificate of Registration from Rwanda Development Board (RDB) with **Company Code: 106426143.** The Company is under the Chairmanship of **Mr. Alexis Bayigamba** who is recognized for establishing successful investments and start-ups in several countries both in Africa and beyond. Some of his investments are currently located in Rwanda and South Africa. One of their successful businesses in Rwanda is Prime Cement Ltd, which was launched in September 2020 but its products are already regarded as *"Cement of Choice"*, mainly due to the high quality of cement that is being manufactured by PCL Rwanda.

Mr. Alexis Bayigamba is the Chairman and Managing Director of Millennial Group Ltd who is a prominent businessman in Angola, UAE, South Africa and Rwanda with high entrepreneurial spirit. He achieved rapid progression in major construction materials projects from the planning stage to implementation.

Prime Cement in Rwanda is currently employing 124 FTE and is looking at an expansion project whereby it will increase its capacity to circa 1.2MT/Y of cement. This expansion project will increase the number of full time employees to 135 staff.

[3] The nominal capacity is calculated based on a daily production capacity of 115t/h for a 3-shift production per day, working 22 days in a month. With 330 days of production in a in year

[4] Shareholders of Millennial Group are Mr. Alexis Bayigamba (50%) and Ms. Kayitare Leoncie Mukundente (50%), both of who are very committed business leaders in innovations and management. Together they manage several profitable businesses.

Company Information

Company Name	Prime Cement Limited	
Address	Kimihurura, Gasabo, Kigali Rwanda	
Phone:	+250 788 301 717	
Email:	alexb@milbridgeholding.com Primecement@gmail.com thierrym@milbridgeholding.com	
Chairman & CEO: Contact Person :	Alexis Bayigamba Kayitare Leoncie Mukundente	
Company Type:	Private, Limited by share	Certificate of Compliance No: 149340955 issued under Section 435 of the Companies Act, 2002 of Tanzania Law.

Project Objectives

PCL aims at manufacturing and supply Tanzania and neighbouring countries with high quality cement products contributing to the economic development of Tanzania and the region. PCL is committed to supply quality cement in at least three products and support the government of Tanzania in its industrialisation agenda and the fast growing construction industry. The Project aims at stepping in to address the demand-supply gap that has recently caused cement shortage in the country. With the mega projects that are being constructed by both private and public sector, PCL board believes that this opportune time to enter into the cement business in Tanzania.

The project main objectives are:

- Establish a new business initiative in a primary and semi heavy industry by installing a cement manufacturing plant to be located in a very strategic area of Shinyanga region, which is situated in the western part of the country. Specifically, the project location is going to benefit from its proximity to the Tanzania Railway line (especially with the expected completion of SGR), its excellent road from Kahama to Kigali Rwanda (and hence to Musanze), and many other strategic areas. The proposed cement plant will be with annual capacity circa 835,000 tons of cement. The Project construction would be completed in 15 months maximum, if expedited it would even be completed in twelve months.
- Create 135 full time employments (FTE) plus hundreds of jobs at the Company premises in Shinyanga, region.
- To be the main high quality cement supplier in Tanzania, capitalizing on the well-perceived reputation of the founders and their long history in the construction business in Rwanda, Angola, and South Africa.
- Ensure know-how and technology transfer relying mainly on local human resources (with the gender balance policy at work).

The Business Model

PCL shall supply the domestic market in Tanzania especially the infrastructure projects that requires high quality cement. It intends to supply at least 80% of its produced cement to the domestic market and 20% shall be exported to the neighbouring countries. Furthermore, PCL shall establish and grow its export markets gradually to the neighbouring countries in particular Rwanda, DRC, and Burundi region as it increases its capacity utilisation thereby reaching 100% capacity utilisation ratio by the year 2030.

The rationale behind this business plan is to establish the financial feasibility of the cement manufacturing plant in Tanzania, with the expected commissioning of the plant being about fifteen months after the construction starts. The Business plan will be used to seek financial support in terms of long-term loans at competitive rates and use the same Business Plan to register the project with Tanzania Investment Centre (TIC) who will consider various incentives to the Project.

The promoters are looking to procure the EPC Contractor, from a shortlist of best supplies of cement plants by the second half of 2021. PCL is confident that by that time the challenges currently poised by the COVID-19 pandemic will have significantly reduced and the majority of the target market will be on the recovery process from the pandemic. The business model for the cement plant will be as follows:

- Distribution of finished cement products shall be made through similar distribution network of Prime Cement Ltd (Rwanda), which includes having regional sales agents who will be given SMART targets for sales of cement.
- Clinker, which is the largest component of the raw materials, shall be imported from Egypt and other countries based on the quality and importation costs. In the long-term horizon, PCL is planning to establish its own clinker plant in areas around Chalinze, where preliminary geological surveys show significant limestone deposits that will be mined. There also local companies in Tanga who are producing clinker and PCL will also engage them for interim supplies of clinker.
- The second largest raw material for the cement is pozzolana, which will be imported from Rwanda where the Group owns several licences for mining the pozzolana. The current audit of deposit show that the quantity of pozzolana can last for more than 150 years for current installed capacity at PCL Musanze Plant. With more capacity at Musanze Pant and this new venture in Tanzania, the promoters are still confident that the pozzolana deposit can take at least 100 years.
- Gypsum is readily available in Tanzania and can be sourced locally.
- The plant will be strategically located in Shinyanga region where the transportation will not be a problem to PCL.

The plant shall work as an agile entity with fast response to private and institutional clientele in the region. Therefore, streamlining the supply chain shall be emphasized in its operations through professional logistical and procurement department that works cross-functionally with the operations, marketing, and finance departments to secure the timely inflows of materials and products delivery.

The Logistics and Procurement Department has the following key accountabilities:

- Plan efficient reorder level of all materials – especially clinker, which under normal circumstances take time to arrive in Tanzania.
- Create a resilient supply chain by continuously updating the Reliable Supplier List, with the possible indicative demand for the main three products that will be manufactured at PCL.
- Maintain and safeguard hazardous materials to ensure safe working environment.

On the other hand, the technical team (Production Unit) will be charged with the responsibilities to design strategies that will ensure cost effective mix of raw materials at the plant.

Customer Segments

Targeted segments shall be decided as follows:

- Private Sector in Tanzania, mainly wholesalers.
- Private Sector in Rwanda, DRC, Burundi and other neighbouring countries, mainly wholesalers.
- Institutional buyers through local and regional tenders

Product Description

PCL shall produce the following three types of cement as summarised in the table below:

Table 1: Cement Product Mix

Cement Type	Clinker %	Pozzolana %	Gypsum
CEM IV/B (P) 32.5 N	45%	50%	5%
CEM II/A-P 42.5 N	75%	20%	5%
MASONRY 22.5 X	40%	55%	5%

The first two products are currently being manufactured at PCL, Musanze Plant and the same (high-quality cement) will be manufactured by PCL Tanzania.

Product quality is controlled stringently along the process line. Control of the product is achieved by using the services of an in-house modern well-equipped laboratory. The laboratory is equipped with a modern X-ray machine among other equipment. PCL uses the X-ray machine for analysis of geological materials, various semi processed products and cement. Control of the process at each step of production ensures that the company meets the required production specifications

Process Description

Raw materials storage

The process starts with receiving raw materials (clinker, gypsum and pozzolana) in the raw materials storage. The material is then extracted from the storage through clamshell gates and belt conveyors to a long belt conveyor transporting the raw materials to the bins. The long conveyor is equipped with a metallic detector to sort out metallic objects of the mill feed. Separate weigh-feeders are extracting raw materials from the bins in set proportions. The feed is transported to the mill inlet with a belt conveyor. The transport to the mill inlet is equipped with a magnet separator, to sort out metallic objects of the mill feed.

The main raw materials required in the process of grinding cement are clinker, pozzolana and gypsum. Prime Cement Ltd will import clinker, gypsum is sourced locally in Tanzania and pozzolana is sourced from Musanze. Rwanda.

Clinker

Clinker is a dark grey nodular material made by heating ground limestone and clay at a temperature of about 1400 °C - 1500 °C. The nodules are ground up to a fine powder to produce cement, with varying amounts of gypsum and pozzolana to produce different grades of cement. Depending on the cement type, Clinker will form approximately 40% - 75% of the feed.

Prime Cement will import clinker from Egypt or Middle East, as it is the closest, before exploring other nations. Prime Cement will also consider any clinker purchasing opportunities from regional producers when they are available.

Pozzolana

Pozzolana is a volcanic material, which has cementitious properties and mostly found in volcanic regions. Depending on the cement type, pozzolana will form approximately 20% - 55% of the feed.

Gypsum

Gypsum is a mineral consisting of hydrated calcium sulphate. It occurs in sedimentary deposits and is used to make plaster board for the building industry. Gypsum plays a very important role in controlling the rate of hardening (or "setting process") of the cement. Gypsum will form 5% of the feed.

Plant and Technology

The technology shall be state-of-the-art in the industry aiming at producing at least three product range of cement with high quality to allow PCL to become the market leader in the region within the next five years attracting mostly institutional customers meeting the growing demand in the region.

The plant will operate with a maximum Capacity (3 daily shifts/22 hrs) of 115T/h over 330 production days resulting an estimated annual capacity of 835,000T/Y. No waste from the plant. Cement reject and spillages will be recycled to the process.

Macro Economic Analysis

Country and Economic Overview of Tanzania

Tanzania is located east of Africa's Great Lakes north of Mozambique and south of Kenya, it has a coastline at the Indian Ocean in east. The nation is bordered by six other African countries: Burundi, the Democratic Republic of the Congo, Malawi, Rwanda, Uganda, and Zambia, it also shares maritime borders with the Comoros and the Seychelles. It has shorelines at three of the Great Lakes: Lake Victoria, Lake Tanganyika and Lake Nyassa (Lake Malawi). The country occupies an area of 945,087 km², which is about three times the size of Italy or slightly larger than twice the size of California. Tanzania has an estimated population of 57.6 million people (estimated by NBS being population of the country by 2018) with her capital being Dodoma. The country's largest city, chief port, major economic and transportation hub and de facto capital is Dar es Salaam.

Reflecting strong income growth over the past decade, on July 1, 2020 the World Bank announced that Tanzania's gross national income (GNI) per capita increased from $1,020 in 2018 to $1,080 in 2019, exceeding the threshold for lower-middle income status. The country's broad vision of its development goals as a middle-income country in 2025 are set out in the Tanzania Development Vision 2025, characterized by high-quality livelihoods; peace, stability, and unity; good governance; a well-educated and learning society; and a competitive economy capable of sustainable growth and shared benefits. Increased GNI per capita is impressive but not enough to reach these goals. Investing in both human development and physical capital is key to achieving these broad goals and improving the quality of life for all Tanzanians.

Tanzania has achieved high growth rates based on its vast natural resource wealth and tourism with GDP growth in 2009-17 averaging 6% -7% per year. Dar es Salaam used fiscal stimulus measures and easier monetary policies to lessen the impact of the global recession and in general, benefited from low oil prices. Tanzania has largely completed its transition to a market economy, though the government retains a presence in sectors such as telecommunications, banking, energy, and mining. The economy depends on agriculture, which accounts for slightly less than one-quarter of GDP and employs about 65% of the work force, although gold production in recent years has increased to about 35% of exports. All land in Tanzania is owned by the government, which can lease land for up to 99 years. The financial sector in Tanzania has expanded in recent years and foreign-owned banks account for about 48% of the banking industry's total assets. Competition among foreign commercial banks has resulted in significant improvements in the efficiency and quality of financial services, though interest rates are still relatively high, reflecting high fraud risk. Banking reforms have helped increase private-sector growth and investment.

Economic and Industry Outlook

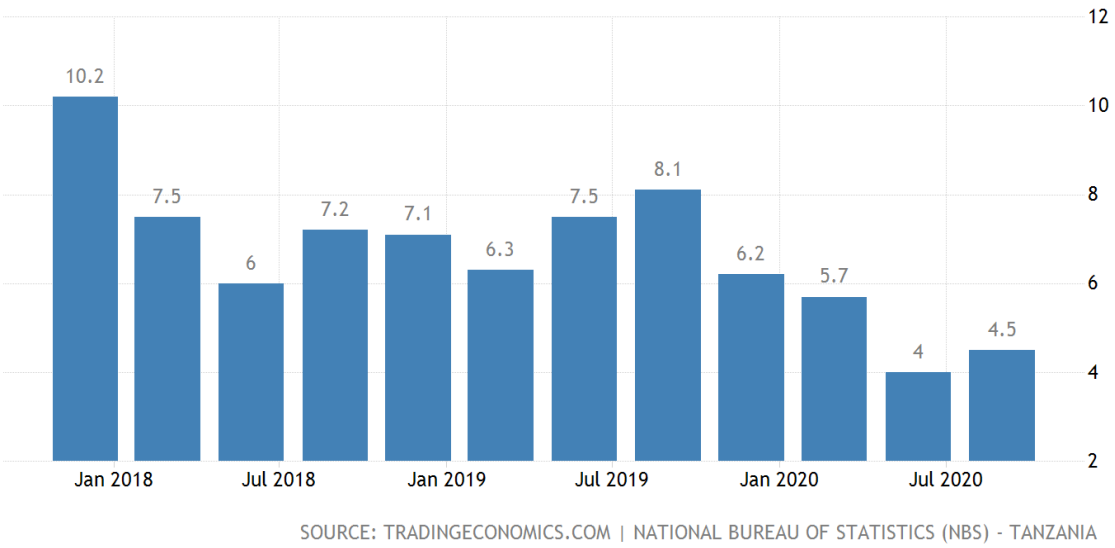
Tanzania Macroeconomic performance and outlook

Tanzania has recorded an annual average growth rate of more than 6% over the past decade and is on course to maintain a robust growth rate of over 6.5% going forward. Despite global economic and financial uncertainties, the economy has been able to achieve these consistent growth rates coupled with a low inflation rate, driven by

activity in sectors such as mining, energy, construction and manufacturing. Improving public sector efficiency and a crackdown on corruption has been the focus of the new administration under the leadership of President John Magufuli, elected in 2015. The government intends to stimulate inclusive growth and reduce poverty levels by running a leaner administration, promoting tax compliance, building Private-Public Partnerships (PPPs) and attracting investment into industrial sector development. Underpinned by favourable demographics and supported by a government that is showing signs of principled leadership with intentions to invest in education, skills transfers and infrastructure to drive growth, Tanzania is well positioned to continue on its current rapid growth path. Its young and culturally diverse population of more than 50 million makes it eastern Africa's second most populous nation after Ethiopia; expected to reach almost 83 million by 2030. Greater emphasis on up scaling urban hard and soft infrastructure and creating employment opportunities in light of a rapidly-growing urban population will be integral in supporting its national development vision, the Tanzania Development Vision (TDV) 2025 that aimed at transforming the economy into a middle-income and semi-industrialised state by 2025. The vision has been realised well ahead of the target.

As indicated in Figure 1, the economy of Tanzania advanced 4.5 percent year-on-year in the third quarter of 2020, quickening from a 4 percent rise in the previous period, as the country lifted all coronavirus restrictions in July. The expansion was mainly driven by construction (17.4 percent vs. 15.4 percent); agriculture (6.7 percent vs. 4.3 percent), manufacturing (5.1 percent vs. 4 percent); trade & repair (2.2 percent vs. -0.1 percent); transport & storage (8.8 percent vs. 9.5 percent) and information & communication (8.7 percent vs. 10.1 percent).

Figure 1: Tanzania Economic Performance (Jan 2018 – July 2020)



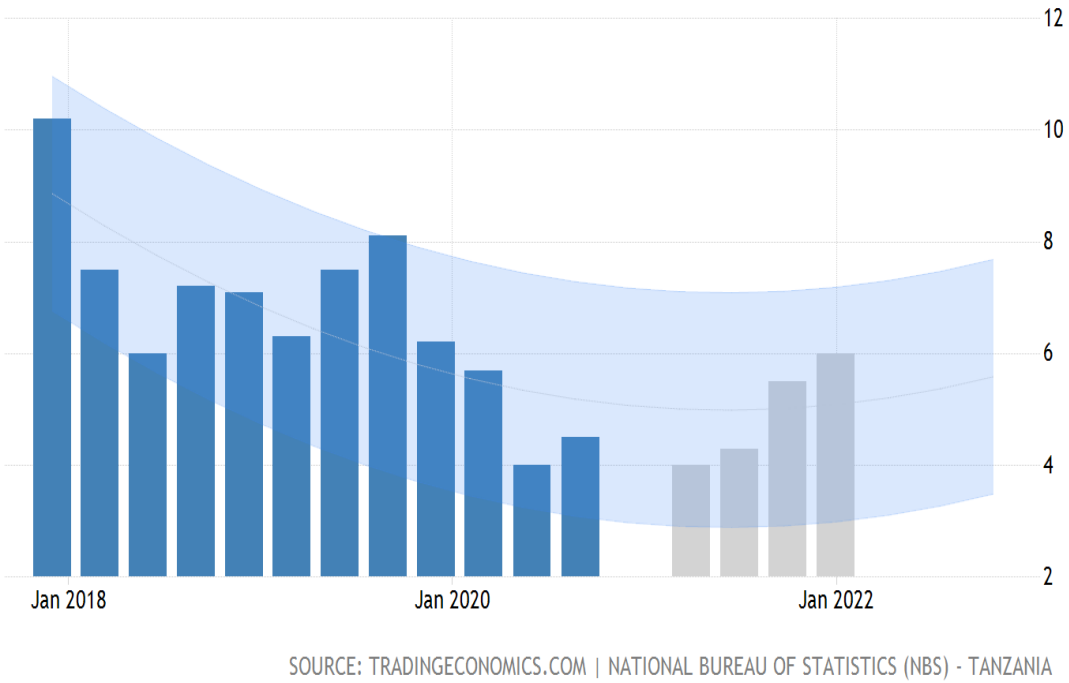
According to NBS, the Services Sector is the biggest sector of Tanzania's economy and accounts for 40 percent of GDP, namely wholesale and retail trade (12 percent); public administration and defence (6 percent) and transport and storage (5 percent). The primary sector accounts for 30 percent of GDP, mainly due to crops production (18 percent). The industrial sector represents 28 percent of total wealth, namely manufacturing (6 percent) and mining and quarrying (5 percent) including natural gas, gold, diamonds, coal, iron ore, uranium, nickel, chrome, tin, platinum, coltan and niobium.

Tanzania's annual inflation rate increased to 3.2% in December of 2020 from 3% in the previous month. It was the highest inflation rate since August, mainly pushed up by prices of housing & utilities (10.2% vs. 9.1% in November); food & non-alcoholic beverages (3% vs. 2.8%) and clothing & footwear (2.7% vs. 1.9%). On a monthly basis, consumer prices inched up 0.8%, after increasing 0.3% in the previous month. Main upward pressure came from prices of food (1.5% vs. 0.3%), of which rice (1.0%), maize grains (2.6%), maize flour (1.9%), sorghum grain (2.6%), fresh fish (1.2%), sunflower oil (3.1%), cooking oil (3.1%), fruits (1.9%), vegetables (2.5%), beans (2.0%), fresh cassava (1.2%), sweet potatoes (3.0%) and cooking bananas (3.0%).[5]

[5] Bank of Tanzania website www.bot.go.tz

GDP Annual Growth Rate in Tanzania (Figure 2) is expected to be 4.00 percent by the end of this quarter, according to Trading Economics global macro models and analysts expectations. Looking forward, we estimate GDP Annual Growth Rate in Tanzania to stand at 6.00 in 12 months time. In the long-term, the Tanzania GDP Annual Growth Rate is projected to trend around 6.30 percent in 2022 and 6.50 percent in 2023, according to our econometric models.

Figure 2: Annual GDP Growth in Tanzania (2018 – 2020)



GDP Annual Growth Rate in Tanzania averaged 6.60 percent from 2002 until 2020, reaching an all time high of 11.90 percent in the first quarter of 2007 and a record low of 2.60 percent in the third quarter of 2009. This page provides - Tanzania GDP Annual Growth Rate - actual values, historical data, forecast, chart, statistics, economic calendar and news. Tanzania GDP Annual Growth Rate - data, historical chart, forecasts and calendar of releases - was last updated on February of 2021.

EAC Economic Outlook

The East African Community (EAC) recorded real GDP growth of 5.9 per cent in 2019, slower than the 6.6 per cent growth in 2018, with the deceleration cutting across most member countries. GDP growth in Uganda was 4.9 per cent in 2019 compared to 6.1 per cent in 2018, while Tanzania's was 6.3 per cent compared to seven per cent in 2018. Burundi recorded an improvement from 1.6 per cent in 2018 to 1.8 per cent in 2019. Rwanda recorded the highest GDP growth rate of 10.1 per cent, supported by both the private and public sector. Kenya's GDP growth is estimated at 5.4 per cent in 2019 compared to 6.3 per cent in 2018, with growth more pronounced in service-oriented sectors.

The construction sector in Kenya, which makes up 5.6 per cent of GDP, registered a growth of 6.4 per cent in 2019, lower than the 6.9 per cent in 2018 – recording slower growth for the fourth year running due to the slowdown in infrastructure development. However, the real estate sector grew by 5.3 per cent, an improvement from the 4.1 per cent growth in 2018.

The Cement Sector: Keeping the Lights on

EAC member states are generally experiencing similar trends in the cement sector, grappling with overcapacity, pricing pressures and weakening demand. Out of the five countries in East Africa, Rwanda is somewhat of an exception with sufficient demand and two operational cement manufacturer, CIMERWA and Prime Cement, while

Tanzania saw a recovery from 2019. The region seems to be on a downward trend in the cyclical nature of the sector, with hopes for a recovery in demand within the next three years.

Market Overview and Analysis

Cement Market Overview

Tanzania is well endowed with limestone, natural gas and coal deposits, making it favourable for cement production. Similar to Kenya, competition has been very stiff in the past five years with the entry of new producers and capacity expansion by older players, resulting in pricing pressures. However, the Tanzanian cement market started to recover in 2019 and players posted better margins, thanks to increased infrastructure spending, lower imports from Kenya, credit supply growth and reduced competition from the stalled operations of ARM Cement. Lower imports were aggravated by a border dispute between Kenya and Tanzania in 2018-19, which triggered import restrictions that included a ban on cement imports from Kenya to Tanzania. Tanzania had locked out cement products from Kenya in 2018 due to the use of imported clinker, but it was resolved after bilateral talks and a verification process by Tanzania.

Nonetheless, there are fewer cement imports to Tanzania from Kenya on increased production capacity. The National Bureau of Statistics (NBS) projects the cement consumption in Tanzania in the foreseeable future to grow by 4.2 rate per annum.

Year 2019 saw a key transaction in east Africa: the administration of ARM Cement and the subsequent sale of assets in Kenya and Tanzania. ARM Cement was placed under administration in August 2018 by its creditors and some of the assets sold in 2019. ARM Cement operates five grinding plants (two in Kenya, two in Tanzania and one in Rwanda) and two clinker plants, including a 1.2Mta clinker plant in Tanzania.

National Cement, which has taken the lead in transactions in the cement sector, acquired assets of ARM Cement in Kenya in 2019 for US$50m. National Cement is a Kenyan cement manufacturer, owned by the Devki Group of companies, with a subsidiary in Uganda and produces the Simba Cement brand. National Cement had also acquired Cemtech (a subsidiary of the Sanghi Group, India) earlier in 2019 for an undisclosed amount. Cemtech received initial approvals to mine limestone and manufacture cement in 2009, with plans to reap from the vast limestone deposits in West Pokot, Kenya. Ten years later, the plant had not been set up, dogged by regulatory challenges. National Cement acquired Cemtech in March 2019 but is yet to commence construction.

National Cement is the only cement producer in Kenya on an aggressive expansion drive (target: 3.5Mta). The company installed additional capacity of 1.2Mta clinker in 2018 and 0.75Mta grinding in 2020. Moreover, it aims to double the capacity of the new 0.75Mta plant in 2020, in addition to benefitting from the acquisition of distressed assets.

Globally, 2019 saw increased discussions around acquisitions, mergers and takeovers in the cement sector, with some large players such as LafargeHolcim considering divestment in Middle East and African markets. LafargeHolcim's subsidiary in Kenya, Bamburi Cement, has reported lower earnings for the last three years but remains one of the strongest players. It has a subsidiary in Uganda, Hima Cement, which is struggling with land acquisition and sales in Rwanda due to a Uganda-Rwanda border dispute. With Rwanda looking to increase local cement manufacturers, the future looks dim for Hima Cement.

Meanwhile, Chinese cement players are targeting global expansion partly through acquisition. Huaxin Cement, a Chinese company, acquired ARM Cement's assets in Tanzania where LafargeHolcim is the largest shareholder.

Cement Industry Outlook in East Africa Region

EAC economies are expected to post lower economic growth in 2020, in line with contracting global growth. The IMF predicts a three per cent contraction of the global economy due to disruptions to economic activity as a result of the COVID-19 pandemic. Kenya is projected to grow its economy by between 1-2.3 per cent in 2020 and around two per cent is forecast for Tanzania.

A momentary decline in construction sector growth is expected in Tanzania in 2020, on account of the pandemic as well as upcoming general elections. Nonetheless, the sector should pick up afterwards, supported by infrastructure development and credit supply growth. An optimistic longer-term outlook is dependent on the sustainability of demand growth, supported by both the private and public sectors.

Equally, demand for real estate and construction in Kenya will be suppressed in 2020 due to the economic effects of the pandemic. Though the period until demand recovery is uncertain, there is a general expectation of a recovery after 2022 (general elections) – a new government will most likely be keen to have its own legacy infrastructure projects. In the meantime, the tough spell could be moderately eased by the government's Housing pillar under the Big Four agenda as well as housing and infrastructure deals secured between Kenya and the UK. The government of Kenya initiated an affordable housing programme with a target of 500,000 units by 2022 as part of its Big Four Agenda. The programme is being implemented as a public-private partnership where the government provides land and a private developer puts up the units. In January 2020 at the UK-Africa Investment Summit, Kenya secured investment deals worth over £1.3bn, which include infrastructure financing and housing. Some of the significant announcements include mobilising private finance into Kenyan projects, support in designing a new facility to underpin infrastructure projects across Africa, including Kenya, and a £30m investment into the construction of 10,000 energy-efficient affordable homes for rent and sale.

For cement companies, the competitive advantage will lie in operational efficiency and balance sheet strength. Unleveraged manufacturers and those producing their own clinker locally have the upper hand on continuity through the current low-demand cycle and the global pandemic.

In addition, sustainability is an emergent trend in the cement sector, and though more entrenched in developed economies, there are visible initiatives in east Africa, mostly under the LafargeHolcim group. Beyond the constructive environmental impact of sustainability initiatives, there is a resultant long-term cost reduction effect, providing a competitive edge.

Standard Investment Bank's review of the East African market last year envisaged consolidation within the Kenyan cement sector in the short- to medium term, driven by the need to boost margins in a highly competitive market. In a market where demand growth will be subdued for a considerable period, consolidation remains the ideal means of survival.

Major Competitors and Analysis

Cement production has expanded sharply since the early 2000s, supported by robust macroeconomic growth and rising construction activity. According to AIB Capital, output reached a compound annual growth rate of 9.7% between 2001 and 2015, starting the period at 900,000 tonnes. The Ministry of Finance and Planning reported that output rose by 4.3% in 2011 to 2.4m tonnes, against 2.3m tonnes in 2010. Production increased by 7.1% in 2012 to 2.6m tonnes, although it moderated in 2013, to 2.4m tonnes, before growing by 18.1% in 2014 to 2.8m tonnes.

AIB Capital found that total installed capacity stood at 3.7m tonnes in 2015, with production averaging 3.3m tonnes, compared to 6.5m tonnes in Kenya, 2.1m tonnes in Uganda and 800,000 tonnes in Rwanda.

TPCC and Tanga Cement are two of the largest Tanzanian cement producers, with market capitalisation of US$4bn and US$1.1bn, respectively, in 2016, while Germany's HeidelbergCement, Switzerland's LafargeHolcim and South Africa's AfriSam Investment Holdings also operate units in the country. TPCC held a 36% market share at the end of 2015, with 1.9m tonnes per annum (tpa) of production, followed by Tanga Cement, with 1.2m t/a.

Dangote is a relatively new plant and it represents the sector's largest recent capacity boost, following the November 2015 inauguration of the $500m, 3m-tpa cement plant in Mtwara in the southeast of Tanzania. The factory has 3000 tonnes per day (t/d) of clinker output, and three packing machines with capacity for 2,400 bags per hour, or 2880 t/d, with plans to fuel its operations via a 30-MW gas-fired power plant. The plant benefits from Tanzania's abundant mineral resources, and Dangote also owns 500m tonnes of limestone reserves at nearby Mtwara mines, providing nearly 150 years of supply. Dangote had captured a 23% market share as of May 2017, according to local press.

Cement capacity increased further in August 2016, when Tanga Cement opened its second production line, boosting total annual capacity to 1.25m t/annum.

Risk analysis and possible mitigations

As for PCL this will be used to point out key areas of concern that may or may not impact negatively on its underlying business. Given the link (both backward and forward linkage embedded in the business structure) it is expected that the major risks affecting the cement industry is likely to strongly affect the PCL business. Hence we consider the following risks and possible mitigations are recommended for PCL. In no particular order, the company's greatest risks are:

- **Market demand risks:** changes in demand of cement leading to changes in pricing and/or industry structure – it is expected however that given the massive experience that Prime Cement has amassed in Rwanda leading to the need for expansion of current capacity to more than double, it is expected that PCL Tanzania will borrow experience from sisters companies that are under **Milbridge Group**, which is now becoming almost a globally-diversified portfolio in East Africa and Middle East Markets with its growth projected for both market penetration and volume of business to be steadily on the upside. As part of the strategy, PCL will import clinker for its two plants (PCL Rwanda and PCL Tanzania) but the Group is seriously considering setting up its own clinker plant in Tanzania by 2023 (which is likely to be an investment of US$250 million). The PCL Rwanda company has licences for pozzolana and its sister company in Tanzania will be importing its Pozzolana and transporting it to PCL Plant in Kahama. Given the central location of the plant to the market, PCL is confident that the cost of raw material, which is a major driver of the production costs, will be relatively stable and less costly. With all these strategies by the parent company, which is main customer of PCL, then the market demand risk is considered manageable.
- **Legal and compliance risk**: such as being found to have violated law covering business conduct such as bribery, corruption, terrorism and unfair competition – PCL will, based on policies currently governing other ventures of same promoters under Milbridge Group, will ensure it maintains a comprehensive risk-based compliance programme with dedicated resources, alongside comprehensive training to its entire staff;
- **Energy prices:** the risk being that energy costs would keep on the rise, or that certain alternative fuels may become unavailable – As for Prime Cement (main customer of PCL) it is anticipated that cement plant would have fuel mix (Electricity for its main mill, LPG/Coal for Pozzolana dryer, supported by energy efficiency strategies that are basically similar to the existing high-technology plant in Musanze, Rwanda;
- **Raw materials risk:** that raw materials (clinker, pozzolana and gypsum) cannot be supplied at economical cost or suitable quality. PCL will strive to apply a range of tactics including strategic sourcing, changing input mixtures and maintaining minimum long-term stock levels of raw materials.
- **Sustainability risk:** The cement industry is associated with significant negative externalities, notably high CO_2 emissions – PCL will always strive to advocate a carbon price, while increasingly aiming the business towards sustainable products and solutions;
- **Political risk:** Due to political instability in its operating markets – PCL believes that diversification is the key response, and is politically neutral shall remain a key policy driver for its businesses in Tanzania as it is for other markets;
- **Talent risks:** Does the company have enough of a 'talent pipeline' for its diversification ambitions? – PCL would strive to evaluate talent in its staff and would invest in talent development;
- **Insurance risks:** Not all risks can be insured – PCL will monitor its status to determine if additional insurance would be required from time to time;
- **Defined benefit pension risk:** This is the risk that pension funds are volatile and that PCL may have to pay into them to 'top them up' - Where possible, PCL will ensure its human capital are joining strong funds that are unlikely to cause these types of unpleasant crunch on pensions.

Construction & Cement Sectors

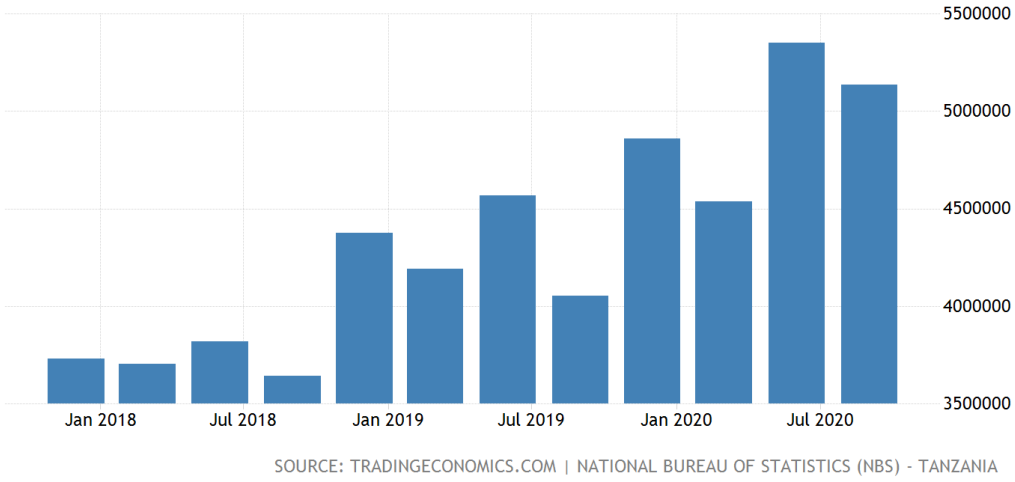
Annual Tanzanian GDP from construction

Industry and construction activity, which includes mining and quarrying, manufacturing, construction, electricity and gas supply, as well as water supply and sewage, grew by 11.8 percent in 2019 compared with 9.7 percent in 2018.

Construction, which contributed 27.5 percent of GDP, grew by 14.1 percent in 2019, mainly associated with on-going infrastructural projects including: Standard Gauge Railway (SGR); Ubungo interchange; construction and expansion of ports, airports, roads and bridges; and building of ships and ferries in major lakes.

According to the National Bureau of Statistics (NBS), however, the GDP from Construction in Tanzania decreased to TZS 5,137,774 Million in the third quarter of 2020 from TZS 5,350,298 Million in the second quarter of 2020 (see Figure 3). The outlook on the economy suggests that the trend sector will stabilize and continue to grow.

Figure 3: Annual Tanzania GDP from Construction



World Cement Market

According to the latest report by International Market Analysis Research and Consulting (IMARC) Group, titled "*Cement Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2020-2025,*" the global cement market size reached 5.2 Billion Tons in 2019. Cement is a construction material made by grinding a mixture of clay and limestone. Depending on its capability to set in the presence of water, it is categorized as hydraulic and non-hydraulic. Non-hydraulic cement reacts with the carbon dioxide in the environment to set and offers optimal resistance against chemicals. On the other hand, hydraulic cement hardens quickly due to a chemical reaction between water and the dry ingredients. Today, different types of cement are produced to meet the varied physical and chemical requirements of specific situations, such as durability and strength.

Global Cement Market Trends

Cement is the backbone of the infrastructure sector since it is utilized for mass constructions, such as civil works, industrial estates and dwellings. Owing to this, there has been a consistent increase in the demand for cement across the globe. Besides this, the rising environmental concerns and depletion of fossil fuel reserves have

prompted cement manufacturers to introduce improved production methods and formulations. This is being done by capturing thermal energy, recycling it into the process, and sourcing power from renewable sources that help in lowering CO_2 emissions from the manufacturing process. As a result, governments across the world have also undertaken various initiatives to promote the use of green cement, which aids in reducing the consumption of natural raw materials, such as water. On account of the aforementioned factors, the market is projected to reach a volume of 6.4 Billion Tons by 2025, expanding at a CAGR of 3.4% during 2020-2025.

Market Summary:

- Based on the type, the market has been segmented into blended, Portland and others. Blended cement currently represents the most popular product type.
- The market has been categorized on the basis of the end use into the residential, commercial and infrastructure sectors. Amongst these, the residential sector dominates the market, accounting for the majority of the overall market share.
- Region-wise, Asia Pacific exhibits a clear dominance in the market. Other regions include North America, Europe, Middle East and Africa, and Latin America.
- The competitive landscape of the market has been examined in the report, with some of the key players being China National Building Material Co., Ltd. (CNBM), LafargeHolcim Ltd., Anhui Conch Cement Co., Ltd., Jidong Development Group Co., Ltd. and Heidelberg Cement AG.

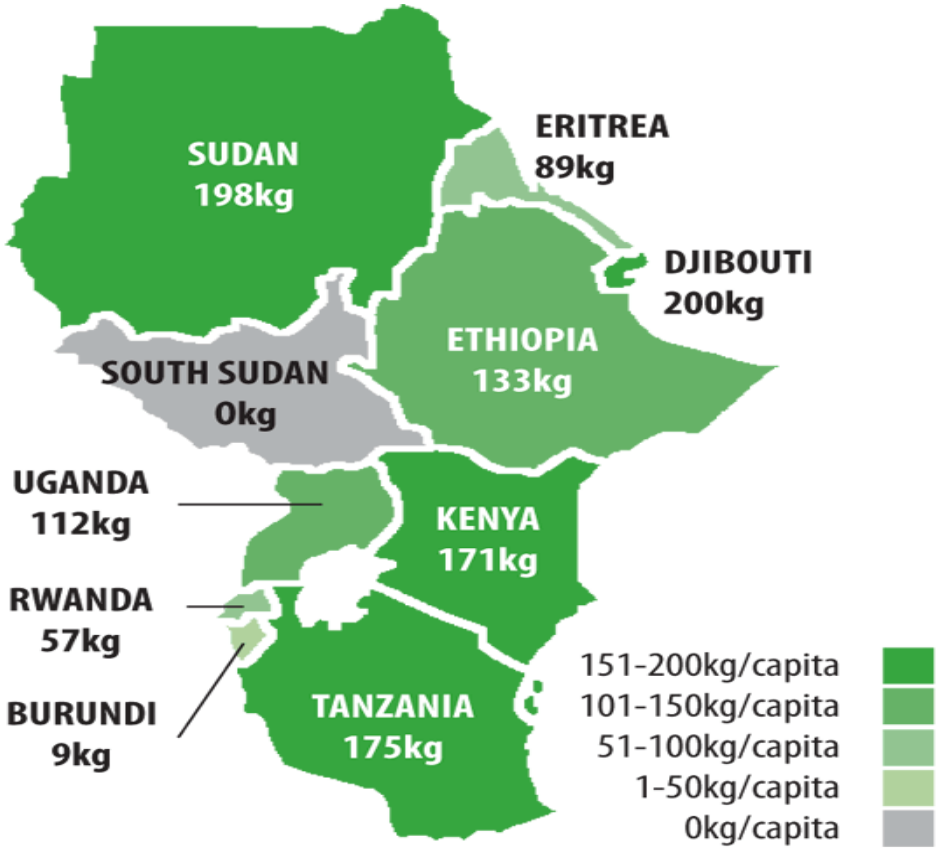
Consumption of Cement in East Africa Region

Various research estimates that the East Africa cement market reached a volume of US$ 28.6 Million tons in 2019.[6] The cement market possesses vast opportunities in East African countries on account of soaring population and inflating income levels in the region. This is also stimulating infrastructural activities in both the residential as well as commercial sector. As a result, various foreign investors are diving in the construction sector and supporting the local cement industries by organizing various training programmes. Besides this, the region is also witnessing several technological advancements, which is leading to a higher production of cement in the region.

Some of the key players operative in the market include: Tanga Cement, TPCC (Twiga Cement), Prime Cement, Armada Mercantile Ltd., Bamburi Cement Limited, Dangote Cement Plc. and Mombasa Cement Limited. Figure 4 provides the consumption of cement per capita. Sudan, Tanzania, Kenya and Djibouti have higher consumption of cement per capita with Burundi consuming fewer kilos per capita.

[6] IMARC Group's recent report, titled "East Africa Cement Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2020-2025"

Figure 4: Cement production capacity/population of East African countries.



Source: Global Cement Magazine & Global Cement Directory 2020

SWOT Analysis

STRENGTHS

- The founders have long history and appropriate network in the manufacturing and trade of construction materials.
- The installation of a state-of-the-art production line providing quality Cement products matching the evolving government requirements for infrastructure development.
- The production line to be sourced from a world-class cement plant manufacturer, which supports the construction cement plant in the Africa continent with experience in East Africa region.
- Kahama location area provides easy access to East Africa (and Tanzania and Rwanda in particular) markets and other neighbouring countries.
- Environment friendly manufacturing process as evidenced at a sister plant in Rwanda.
- PCL has good reputation in Rwanda and would bank on its strict policies and an exemplary culture to penetrate the market in Tanzania and be accepted as such.
- Guaranteed supply of pozzolana for unforeseeable future as the Group own license for mining pozzolana in Rwanda with huge deposits.
- State of the art technology supplied by a vendor with a proven track record in Africa among other markets.

WEAKNESSES

- High cost of logistics especially on the clinker part of raw materials.
- Like most large-scale manufacturing projects, payback period is longer than other sectors for SMEs.
- Higher moisture contents in pozzolana (especially during wet season) hence requiring dryers for removing moisture, which is also costly.

OPPORTUNITIES

- Mega projects that are currently being constructed (SGR, Nyerere Hydropower Plant, various flyovers and interchanges) and those in the pipeline (Msalato International Airport in Dodoma, National Stadium (Dodoma), Dodoma Ring road, Government City at Mtumba, Dodoma).
- Tanzania prospects to become a supply hub of cement for East African region.
- Continued political stability in Tanzania.
- Planned growth in East Africa region infrastructure projects.

THREATS

- Recovery from Covid-19 is slower with possible recurrence of second waves.
- Foreign exchange risks which could impact the ability to purchase raw materials and also service the foreign currency denominates loans and leases. This will be mitigated by
    - ✓ Export to neighbouring to generate forex.
    - ✓ Pricing of dollar requirements into selling price
    - ✓ Engaging with foreign contractors on local projects on US$ terms.

- New entrants – to be mitigated by timely and effective execution.

Strategic Corporate Headlines

Vision Statement

PCL strives to keep building the trust of our customers, employees and the communities both locally and regionally as a result becoming a trusted, preferred, and prestigious company which adds value to the quality of its shareholders' lives and maintains sustainability in its operations.

Mission Statement

We, PCL, continue to provide quality products and services in construction materials sector to boost safety, reliability, and durability in the construction sector on the national and the regional level. To do so we are committed to:

- Be a part of our customers' lives,
- Create value for our shareholders, to achieve sustainability by working efficiently and effectively in our operations,
- Contribute to society, environment, and national economy by focusing on energy efficiency,
- Become a prestigious company in national and international cement industry,
- Provide for the people's need of safe housing,
- Provide quality product and service in new and diverse fields by focusing on customer satisfaction,
- Comply with occupational health and safety rules and standards in all our operations, and
- Encourage the creativity and participation of the members of Prime Cement family.

Our Values

- QUALITY - We provide highest quality product solutions for our customers locally and regionally.
- TRUST - We promote a culture of trust and respect
- TEAMWORK - We promote teamwork in achieving our common goals and business objectives
- INTEGRITY - We conduct our business with high integrity, care for the environment and social responsibility for the communities in which we operate.
- COMMITMENT - We are committed to promoting quality and affordable cement made in East African region by PCL as we strongly believe in the economic development of region and beyond.

Corporate Measurable Goals

- Operate the plant at least by 95% capacity utilization by 2025;
- Reaching a revenue of over US$100 million by 2025;
- Become a market leader by the 3rd operating year reaching its full capacity;
- All new employees to have obligatory induction course on safety measures
- Have Zero Lost Time Accidents (LTAs) through a well-trained HSSE team; and

Critical Success Factors (CSFs)

We identified the following CSFs that are necessary and sufficient for the success of the investment initiative, and which are linked to our mission.

1. We must boost domestic and export marketing channels and establish all seven Zonal branches of distribution centres and competitive off-taker annual contracts;
2. We must apply proper corporate governance;
3. We must develop teamwork
4. We must implement a Planning and Monitoring System; and
5. We must develop dynamic leadership to foster positive work culture.

The Marketing Plan

PCL marketing strategy focuses on providing value to customers through a provision of high-quality cement products at competitive prices. PCL aims at meeting the customers' specific needs in technical specifications, delivery times, and payment terms.

These efforts shall attract more clients to consider PCL as a replacement and alternative of imported ceramic products.

Marketing strategy

Our marketing strategy relies on the following:

- Penetration strategy with aggressive communications (direct selling and high supportive services i.e. customer service and customer care for domestic and export markets).
- Market development: exploiting new markets in the neighbouring countries in particular Burundi and DRC in addition to Rwanda where we already have accumulated experience and our brand is known and accepted a household brand.
- Gradually increase demand and plant utilization on annual basis to achieve the 100% utilization goal by 2030. The marketing strategy will primarily focus on creating awareness to our esteemed customers our dedication to a sustainable produce environmentally friendly cement products suitable for the modernised construction sector, across various avenues as well as with various stakeholders, including but not limited to:

A. Organizing presentations to:

i. Consulting engineers,
ii. Municipal engineers,
iii. University students,
iv. Environmental groups, and
v. Other related technical and decision-making entities including ministries and regional events

B. Other traditional marketing and promotional activities.

A budget will be allocated for these activities and technical as well as non-technical staff will be brought to ensure that a holistic approach to marketing can be launched. The following tables highlights the promotional mix components needed to assist implementing the marketing strategy. The company intends to engage a marketing consultant who will attract a retainer fee of US$20,000 per year (increasing at annual inflationary rate). The actual marketing cost are embedded in the main budget for cost of revenue.

The Sales Strategy

The sales strategy aims at supporting the implementation of the marketing strategy where PCL adapts a market penetration strategy relying on two major aspects:

Providing ultimate customer experience by providing before and after sales technical support, keeping continuous follow up of materials and their functionality at the customer's facility, and maintaining prompt delivery times.

Provide competitive prices in the targeted markets that ensure establishing a long-term customer relation.

PAL has conducted a benchmark against competition regarding the Critical for Quality Attributes. The following list contains the order of these attributes as perceived by corporate and other private clients:

- Terms of Payment
- Price
- Availability
- Responsiveness
- Delivery
- Consistency of Quality
- Conformity to international standards
- After Sale Service

➢ Terms of Payment	Credit Policy for Corporate Accounts: ➢ Trade receivable – 45 days ➢ Trade payable – 31 days
➢ Price	CEM IV 32.5: TZS 18,000/bag **(US$6.56/bag)** VAT exclusive CEM II 42.5: TZS 19,500/bag **(US$7.10/bag)** VAT exclusive 22.5 Grade X: TZS 13,000/bag **(US$4.74/bag)** VAT exclusive Prices are expected to remaining stable (in dollar terms) over foreseeable future due to the following strategies: ➢ Establishing long-term contracts, preferably annual, with Special clients as defined in the marketing strategy of PCL and Milbridge Group that streamlines PCL operations. ➢ Gradual increase in the demand.
➢ Availability	Maintaining proper stock at local and regional distributors
➢ Responsiveness	Provide fast order processing in a cross-functional way, where Sales Representatives cooperate and coordinate with the Technical and Logistics Staffers and the Accounting Staffers. Sales Representatives handle the orders according to volume and type of customer. Technical Staff plans the manufacturing and technical specifications. Logistics Staffers facilitate shipping and delivery. Accounting Staffers organize billing, accounts receivables, collections, etc.
➢ Delivery	Provide advice and technical support to clients in arranging their orders shipment
➢ Consistency of Quality	Applying the international quality standards **ISO 9001-2015** for products quality assurance and good manufacturing practices and by providing standard documentation and product marking ensuring traceability
➢ Conformity to international standards	Working with internationally standardization bodies to maintain conformity to international standards supported by laboratory tests
➢ After Sale Service	Follow up orders systematically with clients to respond to orders changes when required, and to increase engagements with clients and partnership approach.

Therefore, PCL shall work seriously to meet its commitment to provide value for its customers and that implies providing competitive prices, suitable terms of payment, and premium quality. The following framework shall be implemented while running the day-to-day sales operations:

The Sales Plan

- Applying the international quality standards ISO 9001-2015 for products quality assurance and good manufacturing practices and by providing standard documentation and product marking ensuring traceability
- Working with internationally standardization bodies to maintain conformity to international standards supported by laboratory tests
- Follow up orders systematically with clients to respond to orders changes when required, and to increase engagements with clients and partnership approach.
- The targeted markets of the sales plan are the growing domestic market in Angola and the export markets in neighbouring, Rwanda, DRC, and Burundi. The sales plan focuses on the growing opportunity of the government programmes to upgrade and develop the infrastructure and the housing on the national level.
- Table 2 summarises the sales plan covering six-operational years (2023-2028) for PCL.

Table 2: Sales Plan (2023-2028)

(US$/Year)	2023	2024	2025	2026	2027	2028
Sales Forecast						
Cement sold t/y	**459,195**	**709,665**	**793,155**	**793,155**	**793,155**	**793,155**
CEM IV/B (P) 32.5 N	321,437	496,766	555,209	555,209	555,209	555,209
CEM II/A-P 42.5 N	91,839	141,933	158,631	158,631	158,631	158,631
MASONRY 22.5 X	45,920	70,967	79,316	79,316	79,316	79,316
Total Sales (US$)	**$63,958,264**	**$98,844,589**	**$110,473,365**	**$110,473,365**	**$110,473,365**	**$110,473,365**
Sales forecast by market:						
Domestic						
CEM IV/B (P) 32.5 N	241,077	372,574	416,406	416,406	416,406	416,406
CEM II/A-P 42.5 N	68,879	106,450	118,973	118,973	118,973	118,973
MASONRY 22.5 X	34,440	53,225	59,487	59,487	59,487	59,487
Export Market						
CEM IV/B (P) 32.5 N	80,359	124,191	138,802	138,802	138,802	138,802
CEM II/A-P 42.5 N	22,960	35,483	39,658	39,658	39,658	39,658
MASONRY 22.5 X	11,480	17,742	19,829	19,829	19,829	19,829
Sales Forecast						
Domestic Market	47,968,698	74,133,442	82,855,023	82,855,023	82,855,023	82,855,023
Export Market	15,989,566	24,711,147	27,618,341	27,618,341	27,618,341	27,618,341
TOTAL SALES (US$')	**$63,958,264**	**$98,844,589**	**$110,473,365**	**$110,473,365**	**$110,473,365**	**$110,473,365**

The Operational Plan

Production Line Acquisition, Installation, and Commissioning

From its experience in Rwanda and by engaging with potential suppliers, PCL will be looking for an Engineering Company that would supply full production with all the auxiliaries related to cement production operations.

- Nominal capacity is 115T/hour.
- Total Project Cost on a turnkey contract basis is: US$64,705,000.
- Total cost for Engineering Procurement (EP) and transportation is estimated at: US$20,000,000.
- Total costs for civil construction, erection and installation and commissioning are estimated at US$37,000,000.
- Pre-Operational expenses, Initial working capital and interest during construction (capitalised) are totalling to US$5,705,000.
- Land and site development will cost: UDS$2,000,000.

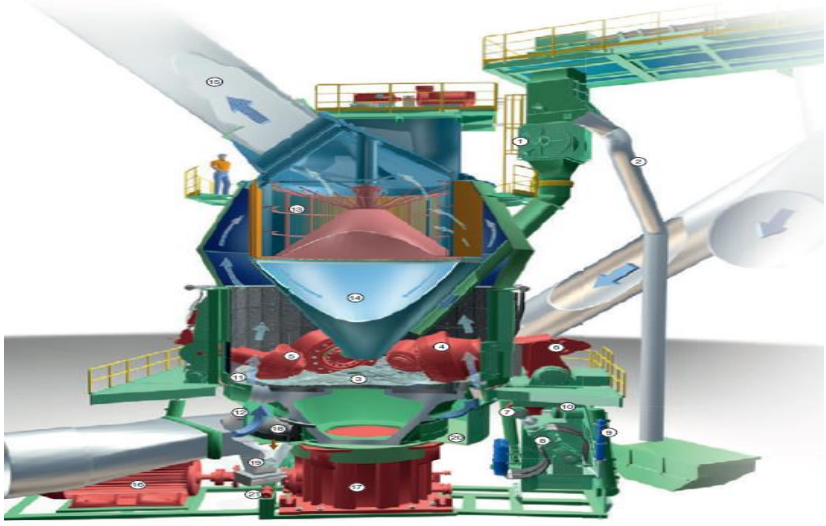
Complete Machines and Systems for Cement Production

PCL will acquire complete machines and systems for cement from reputable suppliers. The plant to be procured would be competitive machines and systems in terms of efficiency, costs, flexibility, and production quality ensuring energy savings and reduced environmental impact. The production line consist of three stages covering the production of Cement as briefly described here below:

STAGE 1: GRINDING

The raw materials enter the mill by the inlet chute. The chute enters the mill on one side of the mill housing, placing the materials on the centre of the grinding table (Figure 5).

Figure 5: An Example of the Vertical Roller Mill



The rotation of the table drives the material towards the edge of the table and under the rollers, where the grinding takes place. Having passed the grinding rollers, the material falls over the dam ring and enters the

nozzle ring area. The gas at this point carries part of the material to the separator and returns part of the material back on the table. The speed of the gas in the nozzle ring is set up in such a way, that a small fraction of the material will fall through the nozzle ring, leaving the mill through the reject chute. The material carried by the gas to the separator, is separated in a coarse fraction and the finished product. The coarse fraction falls down through the separator reject cone onto the mill table for further grinding. Figure 6 shows the roller mixers at PCL.

Figure 6: Vertical Roller Mill at PCL

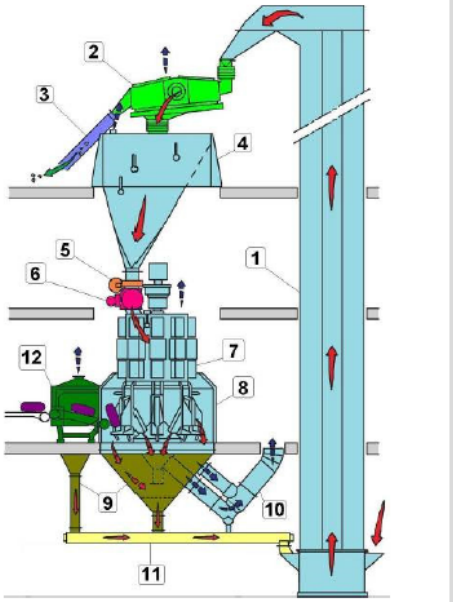
STAGE 2: PRODUCT COLLECTION IN THE BAG FILTER

The fineness of the product is a function of the gas flow through the mill and the separator rotor speed. The finished product leaves the separator at the top, transported by the separator air to the bag filter, where air and material is separated. An automatic sampling device enables continuous sampling of the finished product.

STAGE 3: PACKING PLANT

After delivery to silos, the next process is packing. The packing plant can be divided in two sections: the first is dedicated to fill cement in bags and the second, after some bag transport by belt conveyors, to load the bags on the truck (see Figure 7).

Figure 7: The Packing Plant

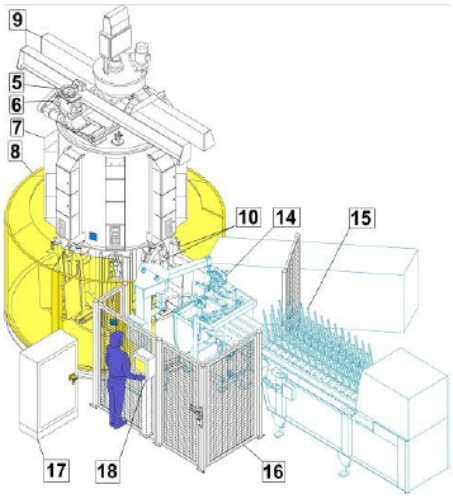


1. Bucket elevator
2. Vibration screen
3. Pipe to the reject collecting box
4. Storage silo for packer
5. Throttle valve
6. Rotary vane feeder
7. Rotary packing machine
8. Screens for rotary packer
9. Dust collecting hoppers
10. De-dusting ducts
11. Dust Recovery screw conveyor
12. Rubber discharge belt

The cement is transported to the packing plant from the cement silos through air slides and lifted by a bucket elevator, screened and stored in a small silo above the packing machine.

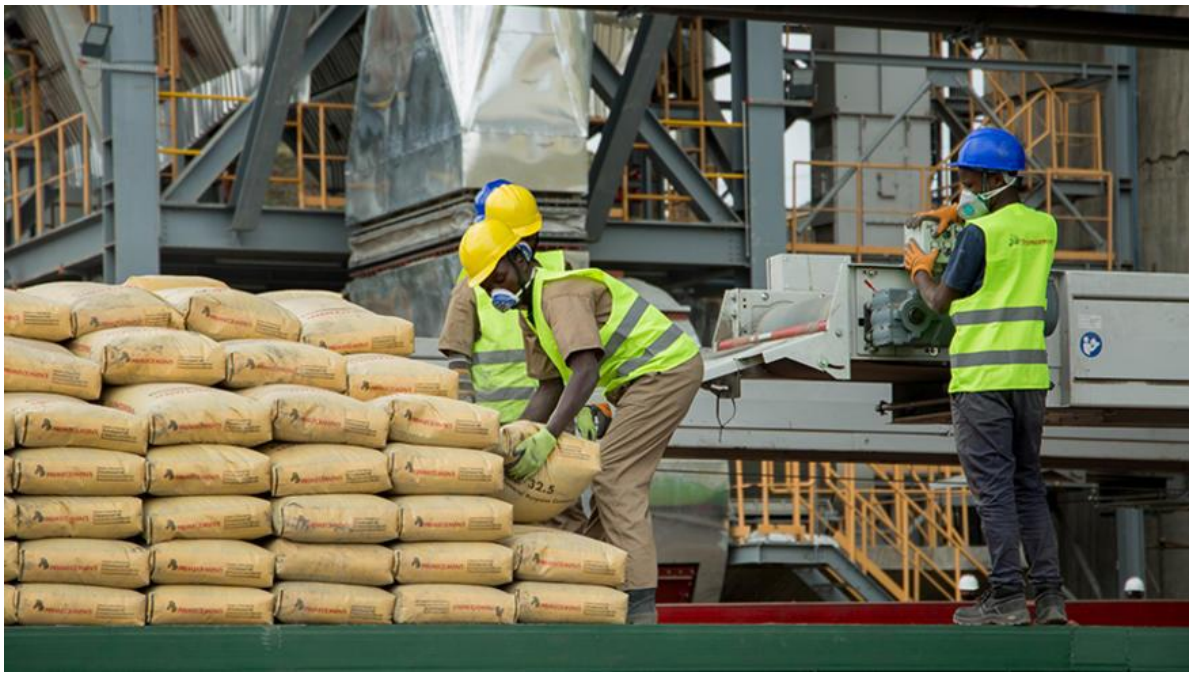
As shown in Figure 8, the bag-packing machine has 8 spouts. The empty bags are placed on the spouts manually and filled during the packer rotation; once the threshold of the pre-set weight has been attained, the bag is evacuated onto the bag transport belt. The transport belt is feeding the trucks where the bags are loaded on trucks. Figure 9 shows an example of final product packed in 50kg bags at PCL Plant.

Figure 8: The Bag Packing Machine



5. Throttle valve
6. Rotary vane feeder
7. Rotary packing machine
8. Screens for rotary packer
9. Supporting frame for rotary packer
10. Spouts (impellers)
14. Bag applicator (Optional)
15. Empty bags storage unit (Optional)
16. Safety barriers
17. General Electric Cabinet
18. Operator Control Panel

Figure 9: Prime Cement Packed in Bags



To ensure the quality of the final products the raw materials mix is controlled from dully-automated control room, which received the mix parameters from a modern laboratory at the plant (Figure 10).

Figure 10: Prime Cement Laboratory

Operational Assumptions

Table 3: Operational Assumptions

	2023	2024	2025	2026	2027	2028
Operational Assumptions						
Nominal capacity (T/day)	2,530	2,530	2,530	2,530	2,530	2,530
Number of days/Year	365	365	365	365	365	365
Planned stoppage days /year	35	35	35	35	35	35
Actual production days /Year	330	330	330	330	330	330
Nominal capacity (T/Year)	834,900	834,900	834,900	834,900	834,900	834,900
Capacity utilisation (%)	55%	85%	95%	95%	95%	95%
Actual capacity (T/Year)	**459,195**	**709,665**	**793,155**	**793,155**	**793,155**	**793,155**

Products' Type Produced/Year

Table 4: Product Types

	2023	2024	2025	2026	2027	2028
Product Type Produced (%age)						
CEM IV/B (P) 32.5 N	39%	60%	67%	67%	67%	67%
CEM II/A-P 42.5 N	11%	17%	19%	19%	19%	19%
MASONRY 22.5 X	6%	9%	10%	10%	10%	10%

Production Cost Analysis (Per Ton Produced)

Table 5: Production Cost Analysis

	CLINKER $/T	POZZOLANA $/T	GYPSUM $/T	DIESEL $/L	ELECTRICITY $/kW	PACKING $/T
PRICE $/t, $/l, $/Kw	$124.20	$22.00	$120.00	$0.86	$0.13	$4.00
Moisture content	0.50%	5.00%	2.50%			
PCL TANZANIA CEMENT	CLINKER	POZZOLANA	GYPSUM	DIESEL L/H	ELECTRICITY kW/t	t/h
CEM IV/B (P) 32.5 N	45.00%	50.0%	5.0%	370	33	50
CEM II/A-P 42.5 N	75.00%	20.0%	5.0%	370	33	60
MASONRY 22.5 X	40.00%	55.0%	5.0%	900	35	100

Key highlights on production costs are:

- ✓ Clinker is imported into Tanzania through Tanga Port at US$43.20/ton;
- ✓ Transportation of clinker to Kahama is estimated to cost US$70/ton (based on cost currently incurred by PCL Rwanda);
- ✓ Handling costs are estimated at US$11/ton (assumed to be exempted from some charges at the port once the TIC Certificate has been secured);
- ✓ With drier at Musanze, the imported Pozzolana to Kahama will have significantly reduced moisture contents to 5% (maximum);
- ✓ Pozzolana total cost to Kahama site is estimated at US$22/ton.

Production cost

Table 6: Projected Production Costs

(US$)	2023	2024	2025	2026	2027	2028
Production Cost (Bulk)						
CEM IV/B (P) 32.5 N	4,026,453	6,222,701	6,954,783	6,954,783	6,954,783	6,954,783
CEM II/A-P 42.5 N	1,558,173	2,408,086	2,691,390	2,691,390	2,691,390	2,691,390
MASONRY 22.5 X	551,264	851,953	952,183	952,183	952,183	952,183
Production Cost (Bags)						
CEM IV/B (P) 32.5 N	23,909,453	36,950,972	41,298,145	41,298,145	41,298,145	41,298,145
CEM II/A-P 42.5 N	9,141,901	14,128,392	15,790,556	15,790,556	15,790,556	15,790,556
MASONRY 22.5 X	3,279,954	5,069,019	5,665,375	5,665,375	5,665,375	5,665,375
Personnel Costs (Salaries						
Production/Operations Dept.	620,815	630,127	639,579	649,172	658,910	668,794
Quality Department	127,890	129,808	131,755	133,732	135,738	137,774
Business Development	404,376	410,442	416,598	422,847	429,190	435,628
Total Production Costs	**$43,620,278**	**$66,801,499**	**$74,540,364**	**$74,558,183**	**$74,576,269**	**$74,594,626**

Maintenance Cost of the Production Line

Table 7: Projected Maintenance Costs

	2023	2024	2025	2026	2027	2028
Maintenance costs of machinery (%)	*1.0%*	*1.1%*	*1.1%*	*1.2%*	*1.2%*	*1.3%*
Maintenance costs of machinery (US$'000)	640	1,038	1,218	1,279	1,343	1,410

Operations Department

According to the plant layout and process flow, PCL will, at least, require a total staff headcount for the Operations in its main departments and sections totalling to 60 FTE.

Position			#	*Reports to*
Operations				
Plant Manager			1	Managing Director[7]
	Production Section Head		1	Plant Manager
		Production Team Leader	1	Production Section head
		Shift Supervisor/Dispatcher	1	Production Team Leader
		Wheel Loader Operator	1	Shift Supervisor/Dispatcher
		Packing Plant team Leader	1	Plant Manager
		Bag Placer	6	Production Team Leader
		Forklift Driver	1	Packing Plant team Leader
		Bag Shifter	4	Packing Plant team Leader
		CCR Operator - Expert	2	Plant Manager
		CCR Operator	4	CCR Operator - Expert
		Patroller	5	Production Team Leader

[7] The Management Director seats in the Board and reports to the Chairman & CEO

	Position			#	Reports to
	P&M Manager			1	Plant Manager
		Deputy Mechanical Section Head		1	Production &maintenance Manager
			Equipment maintenance team leader	1	Production & maintenance Manager
			Bulldozer Operator	1	Equipment maintenance team leader
			Crane Operator	1	Equipment maintenance team leader
			Excavator Operator	1	Equipment maintenance team leader
			Mechanical fitter & turner	1	Deputy Mechanical Section Head
			Mechanical technician	2	Deputy Mechanical Section Head
			Mechanician	1	Mechanical technician
			Junior Mechanical	1	Mechanician
			Lubricator	1	Mechanician
			Welder	1	Mechanical technician
			Workshop Machinists	1	Mechanical technician
			Plumber	1	Deputy Mechanical Section Head
	Instrumentation Team Leader			1	Deputy Mechanical Section Head
		Instrumentation Technician		2	Instrumentation Team Leader
			Electrical Section Head		
			Electrical Team Leader	1	Deputy Mechanical Section Head
			Electrical Technician	1	Electrical Section Head
			Electrician	1	Electrical Team Leader
			Mobile Equipment Electrician	1	Electrical Technician
				1	Electrical Team Leader
			Health & safety Assistant	1	Plant Manager
			Health & safety officer	1	Health & safety Assistant
Quality	Quality Manager			1	Plant Manager
		Chief Chemist		1	Quality Manager
		Deputy Chief Chemist		1	Chief Chemist
			Chemical Lab Technician	3	Deputy Chief Chemist
			Lab Operator	3	Deputy Chief Chemist
			Physical Lab Technician	2	Deputy Chief Chemist
TOTAL Headcount of Operations staff				**60**	

PCL Premises

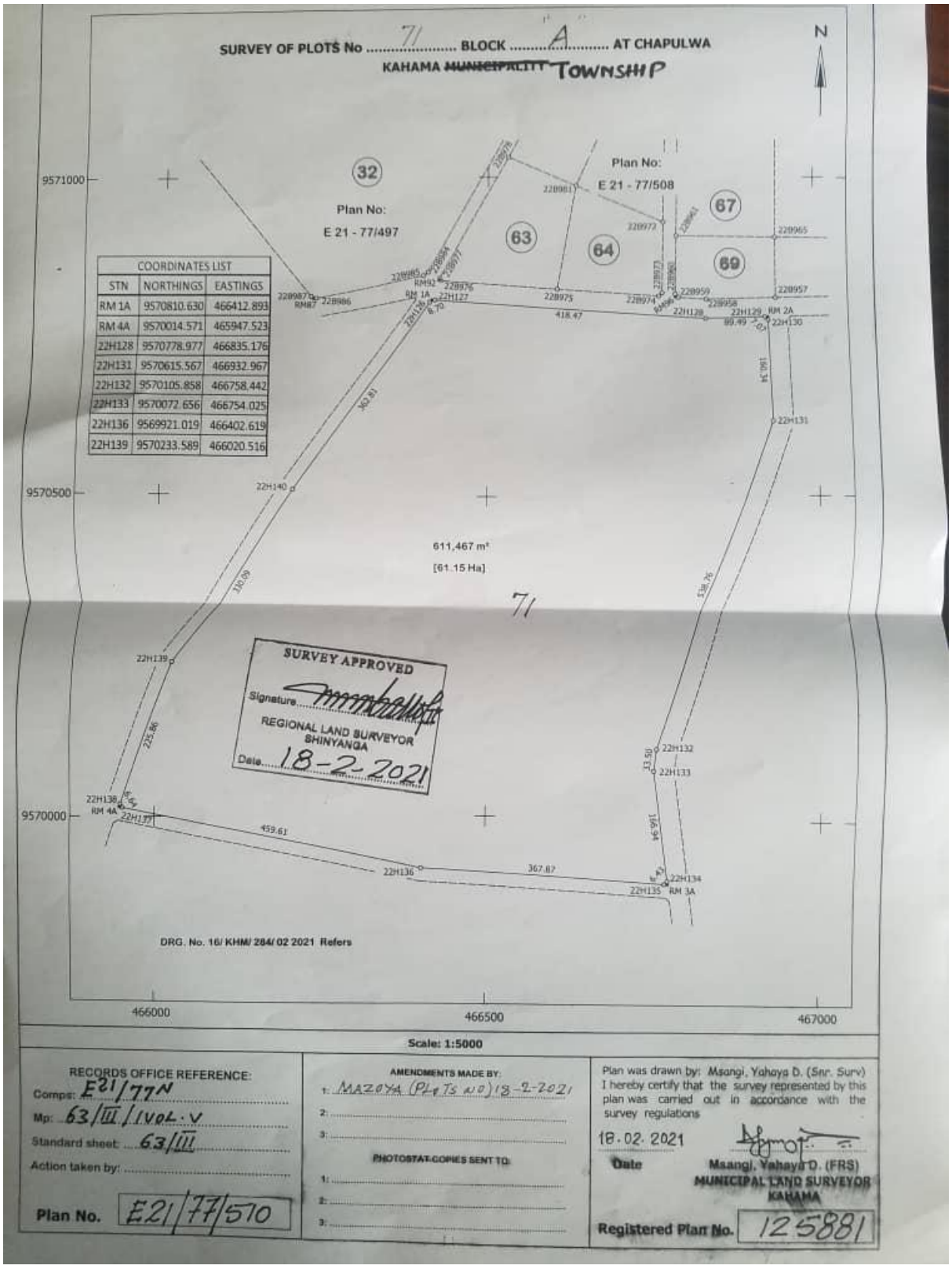
The PCL plant will be accommodated on Plot 71, Block A, Kahama Township in an area of about **61.15 hectares,** of which Kahama Municipality (Figure 11) and other government authorities are completing its allocation to the Project. Specifically, the land is at Chapulwa Industrial Zone The Plant will be located approximately 460 Km from Kigali, 1,000 Km from Dar es Salaam and 500 Km from Dodoma. The Kahama Municipality is only 35 km from Isaka Dry Port and Railway line from Dar es Salaam to Mwanza.

With the envisaged completion of Tanzania SGR from Dar es Salaam to Mwanza (under construction) and Isaka to Kigali SGR, it is expected that in the next 5 years, PCL would have its transportation costs significantly reduced due the use of rail in transporting raw materials.

According to preliminary layout sketch (done internally by PCL), the newly built plant would only require an estimated area of **22.6 hectares**, which is **56 per cent** of the land available for PCL investments in Tanzania.

The remainder portion of the area (17.9 hectares) will be used for development of other industrial ventures currently being contemplated by the Milbridge Group. One of such industry to be located next to the cement plant will be a bagging plant that will be producing P.P Woven Bags for the packing of cement from PCL.

Figure 11: Proposed Plot for the proposed PCL Plant



Project Implementation

The implementation period for the project under consideration will be 15 months. This period assumes that all main activities such as TIC Investment registration, Social & Environmental Impact Assessment (SEA), Application of all administrative licenses, and fund mobilization will be completed in time to allow the EPC Contractor to commence main activities under Line Erection, Installation, and Commissioning.

No.	Line Erection, Installation, and Commissioning	MONTHS														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	KICK-OFF MEETING AFTER CONTRACT COME INTO FORCE															
2	ENGINEERING AND PROJECTING															
3	CIVIL WORKS															
4	MECHANICAL EQUIPMENT DELIVERY															
5	ELECTRICAL EQUIPMENT DELIVERY															
6	ERECTION OF MECHANICAL AND ELECTRICAL EQUIPMENT															
7	TEST AND COMMISSIONING															

	Year -2		Year -1		Year 1	
Period/Semester						
Main Activity						
Business plan drafting						
TIC investment registration						
Taxes exemption application						
Social & Environmental Impact Assessment (SEA)						
Application of all administrative licenses						
Funds mobilization						
Import of main CAPEX						
Line Erection, Installation, and Commissioning						
Complete plant						
Auxiliary plant						
Heavy machinery & vehicles						
Plant construction						
Excavator & wheel loader						
Final key staff recruitment						
Prior installation civil works						
Installation & commissioning						
Technical team training & ongoing support						
Ongoing production & sales						

The Human Resources Plan

Organization, Governance and Management Systems

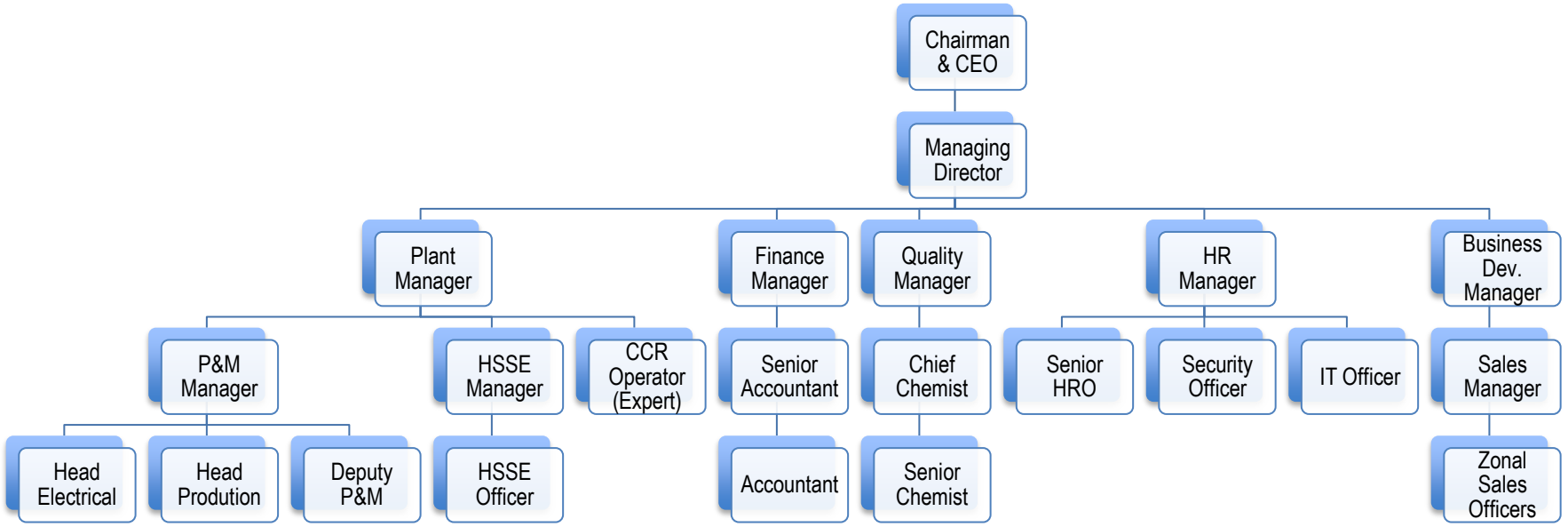
The organizational structure of PCL reflects and supports its strategic headlines and the key business processes. It applies a functional structure to facilitate its day-to-day activities and to achieve its future goals. The functional structure comprises of four functional departments: Operations, Quality Management, Business Development, Human Resources, and Finance.

The Quality department will run an effective quality assurance system for the management and monitoring of the quality system implementation throughout the company through reviewing and monitoring activities for compliance with policies, and with methods, processes and associated standards and procedures like ISO 9000 and ISO 14000.

While the Business Development Department is responsible for promoting the company and driving sales through a process that incorporates research, business development, product development, promotional activities management, marketing planning, sales policy formulation, and monitoring and control.

The Chairman who doubles as the CEO reports to the Board of Directors that constitutes various persons of high integrity.

Figure 12: PCL Organisation Chart

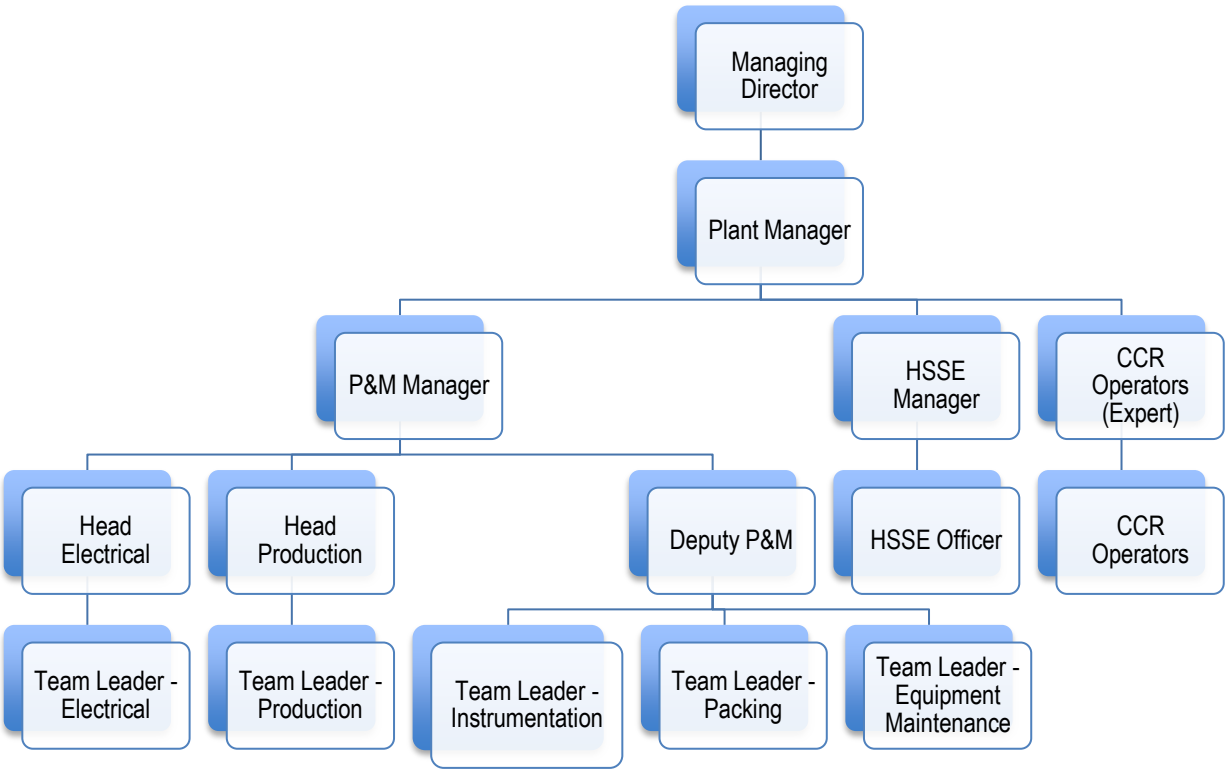


The Human Resources Department shall carry out the following services: Policy formulation, organizational development and manpower planning, job analysis and job description, compensations and rewards, employee's relations, performance management, and training and development. In addition to industrial safety and security and other administrative functions such as employees break room (canteen) management.

In order to mitigate operational and financial risks and applying good governance system, the company shall outsource Internal Auditor to provide the board with periodic reports on compliance and business processes development.

Operations Department Structure

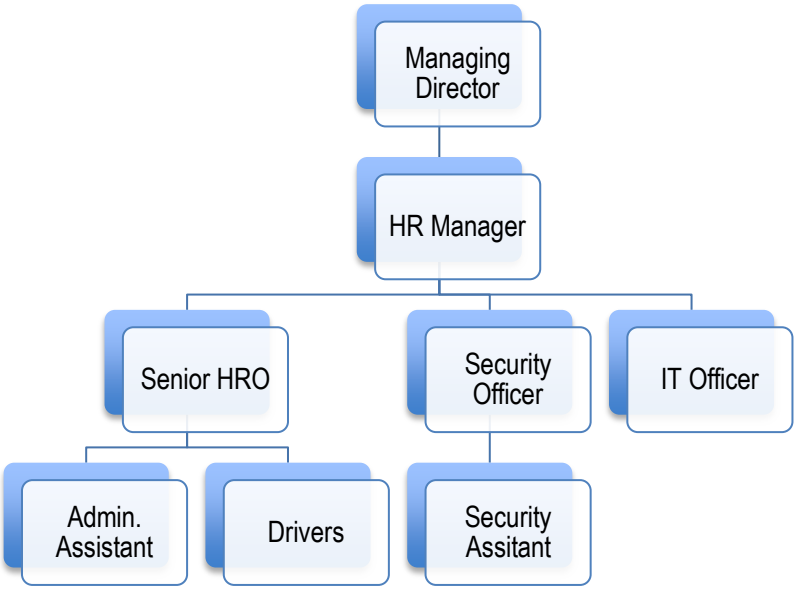
Figure 13: Operations Department Organisation Chart



Operations Department shall oversee production inputs acquisition, processing of production inputs and all the logistical, materials handling, and transportation activities. Furthermore, it supervises the implementation of the HSSE (Health, Safety, Security & Environment) system in the plant.

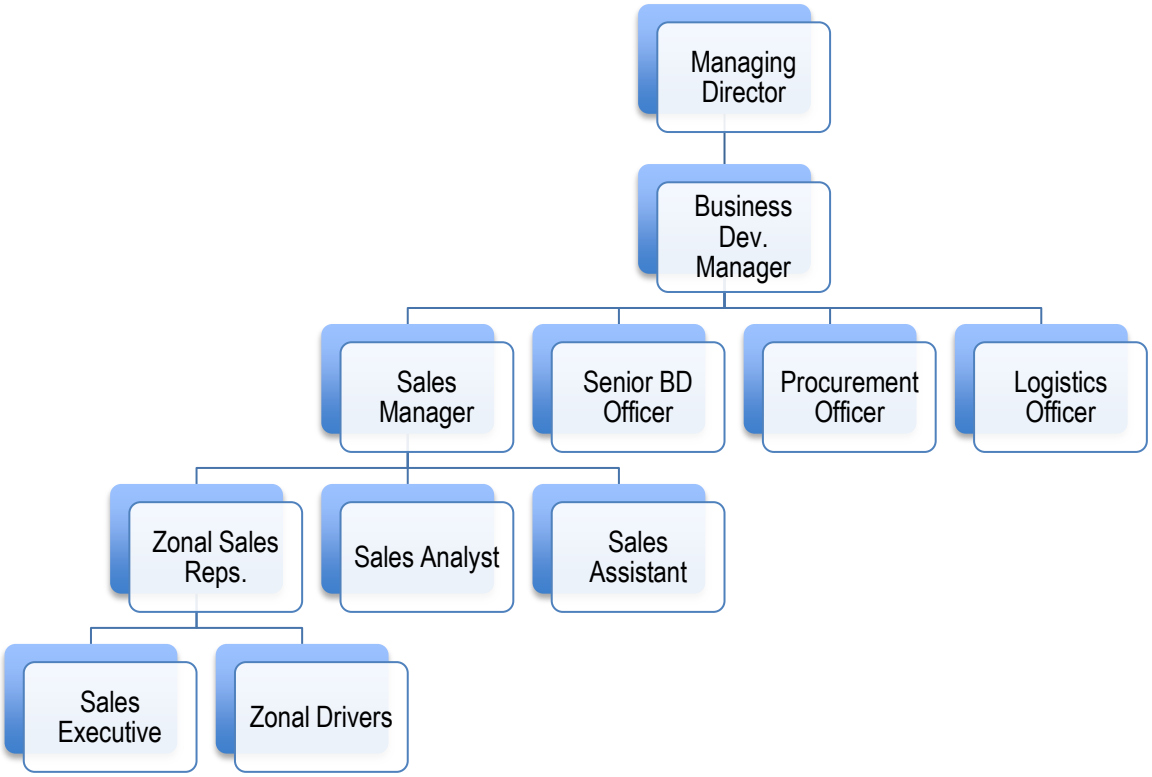
Human Resources Department Structure

Figure 14: HR Department Organisation Chart



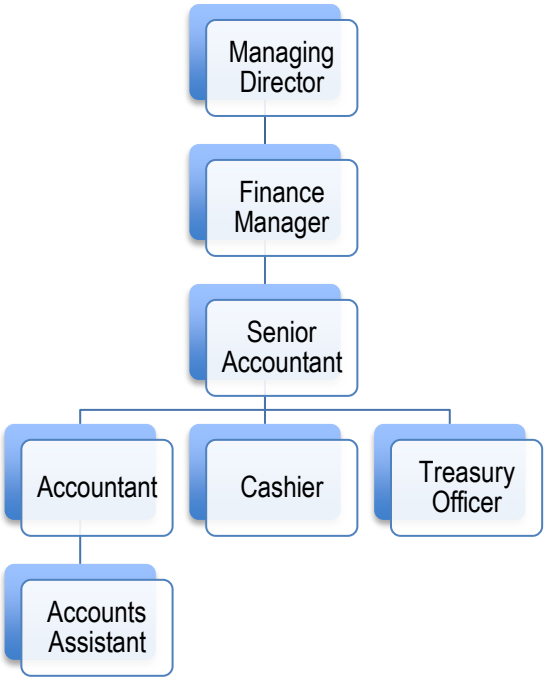
Business Development Department Structure

Figure 15: Business Development Department Organisation Chart



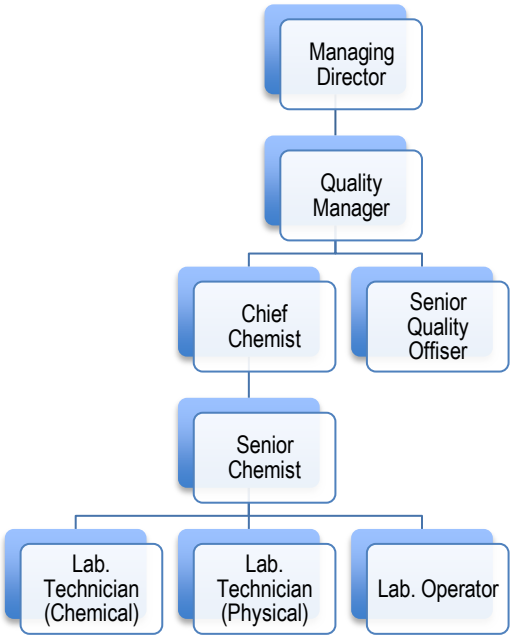
Finance Department Structure

Figure 16: Finance Department Organisation Chart



Quality Department Structure

Figure 17: Quality Department Organisation Chart



PCL Headcount

Team Title	*Headcount*
Executive Management	3
Operations Department	60
Quality Department	11
Business Development	40
Human Resources Department	13
Finance Department	8
	135

	Position	**#**	**Reports to**
BOD	Chairman & CEO	1	Board of Directors
Executive Management			
	Managing Director	1	Chairman & CEO
	Executive Secretary	1	Managing Director
	Sub-total	**3**	
Operations Dept.			
	Plant Manager	**1**	**Managing Director**
	Production and maintenance Manager	1	Plant Manager
	CCR Operator - Expert	2	Plant Manager
	Production Section Head	1	Production and maintenance Manager
	Electrical Section Head	1	Plant Manager
	Deputy Mechanical Section Head	1	Production and maintenance Manager
	Instrumentation Team Leader	1	Plant Manager
	Equipment maintenance team leader	1	Production and maintenance Manager
	Packing Plant team Leader	1	Plant Manager
	Electrical Team Leader	1	Electrical Section Head
	Production Team Leader	2	Production and maintenance Manager
	Excavator Operator	2	Plant Manager
	Mechanical fitter and turner	1	Production and maintenance Manager
	Forklift Driver	1	Plant Manager
	Welder	1	Electrical Team Leader
	Bag Placer	6	Production Section Head
	Bulldozer Operator	1	Production Section Head
	CCR Operators	3	CCR Operator - Expert
	Crane Operator	2	Production Section Head
	Electrical Technician	1	Electrical Team Leader
	Electrician	1	Electrical Technician
	HSSE Officer/Manager	1	Managing Director
	HSSE Assistant	1	HSSE Officer/Manager
	Instrumentation Technician	2	Electrical Team Leader
	Junior Mechanical	1	Instrumentation Technician

	Lubricator	1	Production Section Head
	Mobile Eqpt. Electrician	1	Electrical Team Leader
	Mechanical technician	2	Deputy Mechanical Section Head
	Mechanician	1	Deputy Mechanical Section Head
	Patroller	6	Production Section Head
	Plumber	1	Production Section Head
	Shift Supervisor/Dispatcher	1	Production Section Head
	Wheel Loader Operator	1	Production Section Head
	Workshop Machinist	1	Production Section Head
	Bag Shifter	4	Production Section Head
	Sub-total	**60**	
Quality Department			
	Quality Manager	**1**	**Managing Director**
	Chief Chemist	1	Quality Manager
	Senior Quality Officer	1	Quality Manager
	Senior Chemist	1	Chief Chemist
	Chemical Lab Technician	3	Senior Chemist
	Lab Operator	2	Senior Chemist
	Physical Lab Technician	2	Senior Chemist
	Sub-total	**11**	
Business Development			
	Business Dev. Manager	**1**	**Managing Director**
	BD Officer	1	Business Dev. Manager
	Sales Manager	1	Business Dev. Manager
	Zonal Sales Executive	7	Sales Manager
	Dispatcher Officer	2	Sales Manager
	Logistics out bound	3	Sales Manager
	Zonal Regional Driver	7	Zonal Sales Executive
	Sales Analyst	2	Sales manager
	Sales Assistant	7	Sales manager
	Sales Executives (HQ)	2	Sales manager
	Logistics in bound	2	Business Dev. Manager
	Procurement Officer	1	Business Dev. Manager
	Store Officer	1	Business Dev. Manager
	Weighbridge Operator	3	Sales Manager
	Sub-total	**40**	
Human Resources Dept.			
	HRM	**1**	**Managing Director**
	Senior HRO	1	HRM
	IT Officer	1	HRM
	Security officer	1	HRM
	Administrative Assistant	1	Senior HRO
	Drivers	6	Senior HRO
	Security Assistant	2	Security officer

	Sub-total	**13**	
Finance Department			
	Finance Manager	**1**	**Managing Director**
	Senior Accountant	1	Finance Manager
	Accountant	1	Senior Accountant
	Accounts Assistants	3	Accountant
	Cashier	1	Senior Accountant
	Treasury Officer	1	Senior Accountant
	Sub-total	**8**	
	TOTAL HEADCOUNT	**135**	

Job Title, Direct Supervisor, Headcount, and Main Responsibilities

(Only prepared for Senior Management Team (SMT) and Key Areas Personnel (KAP).

Job Title	*#*	*Reports to*	*Job Purpose*
Chairman & CEO	1	Board of Directors	• Responsible for giving strategic guidance and direction to the board to ensure that the Company achieves its financial vision, mission, and long-term goals.
Managing Director	1	Chairman & CEO	• To direct and control all business operations. Head the development of the annual operating plan and budgets and the establishment of a planning and monitoring system and the implementation of corrective actions.
Plant Manager	1	Managing Director	• To ensure efficient operations and production to meet required output. Overseeing production planning and utilization. Continuously improve productivity and processes of plant machinery and personnel. • Overseeing inventory and materials management and procurement. Develop and oversee all HSSE (Health, Safety, Security & Environment) policy and procedures. • Create company-wide infrastructure and guidelines to support initiatives to improve safety and monitor their outcomes. • Develop and manage an Operations Excellence team that will continually work towards continuous improvement in all areas of operations and production. • Contribute to the development of the annual operating plan and budgets.
Business Dev. Manager	1	Managing Director	• Develop and maintain strategic long-term trusting relationships with high volume customers to accomplish organic growth. Communicate company products and services via Calling and E-mail and build relationships to uncover prospect needs. Document and update CRM with daily activities as required. Achieve weekly and

Job Title	#	Reports to	Job Purpose
			monthly goals. • Ensure reporting and communications is frequent and bi-directional. Taking up revenue responsibility. • To research and analyze the customer's requirements and present best solutions. Research key customer wants and needs Selection process. • Supervise, and follow up the entire domestic and export transactions and build up the capacity of designated staff in his department. • Manage and develop the sales and marketing plan and contribute to the development of the annual operating plan and budgets. • Manage tender application process.
HR Manager	1	Managing Director	• Supervise and provide consultation to management on strategic staffing plans, compensation, benefits, training and development, budget, and labour relations. • Manage and maintain the hygiene and healthy working environment and the personnel safe transportation.
Finance Manager	1	Managing Director	• Manage accounting and financial control functions and establish a financial strategy for the profitable long-term growth of the business.
Senior Accountant	1	Deputy Finance Manager	• As above. But only manages staff under him and acts as Finance Manager in his absence.
Accounts Assistants	3	Senior Accountant	• Processing and making payments for cash purchases and creditors' payments once they become due. Reimbursing employees for expenses incurred on behalf of the Company, processing of creditors invoices and reconciling payable accounts to ensure that the creditors listing is fully up dated. Responsible for preparing the monthly aging creditors listing report. Responsible for the administration and documentation of all salaries, wages, bonuses, and deductions (payroll tax, social security) received by employees.
Cashier	1	Deputy Finance Manager	• Handles all the cash operations of the company, including verifying distribution centres' deposits, preparing daily Company's deposit, assisting with department bank audits, and assisting with all cash handling activities.
PAA/Executive Secretary	1	Managing Director	• Provide high-level administrative support by conducting research, preparing statistical reports, handling information requests, and performing clerical functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings.
Production and Maintenance	1	Plant Manager	• Leads production department to efficiently manufacture budgeted amount of products while meeting safety,

Job Title	#	Reports to	Job Purpose
Manager			environmental, and quality objectives. • Ensures practices are in alignment with company vision in the above areas. Communicating, improving, and adhering to safety policies in all work environments and areas. • Direct the effective and efficient use of plant production equipment and people. • Provide leadership to shift employees by directing, coaching, supporting, and delegating, as the situation requires. • Equipment performance and reliability. Maintain motivated and effective workforce and positive work environment. • Oversee predictive and preventive maintenance programs and systems for mechanical, electrical, and civil structures. • Collaborate closely with the Quality Manger to analyze statistical quality control data to determine present and establish proposed quality and reliability expectancy of the process, machinery, capacity of production staff and finished product. • Ensure a plant-wide machine lubrication program. • Manage maintenance budget while focusing on optimization and reduction of plant costs. • Develop and execute plant maintenance cost reduction program. • Contribute to the preparation of capital budget, and reporting. • Administer the upgrade of the plant engineering library • Provide project management direction to ensure projects are completed on time and within budget. • Oversee the troubleshooting of technical problems in the plant; provide direction as required. • Lead weekly the inspection, planning and execution program based on continuous improvement and cost management. • Oversee the coordination of technical projects with suppliers, engineering firms, manufacturers, contractors, and all departments within the company • Advise supervisors of labour issues including safety, security, employee relations, scheduling, training, etc. • Continually inspect and evaluate mechanical components of the facility and equipment for effectiveness.
HSSE Manager	1	Managing Director	• Administer and participate in the evolvement of the rewards program including benefits and perks, compensation, and other forms of recognition. • In partnership with finance and legal, manage and assess all of HR systems. • Ensure all recruitment, hiring, on-boarding and compensation practices comply with applicable law

Job Title	#	Reports to	Job Purpose
			• Supervise on-boarding practices with an eye towards building a great employee experience. • Implement the employee development and training program for employees and managers. • Adapt and extend performance review framework to include all teams and functions. • Ensure career paths and compensation structure are formally documented and communicated for all roles.
Quality Manager	1	Managing Director	• Monitors quality control and collaborates with plant management regarding current quality control status and actions needed for improving product quality. • Establishes, communicates, and assigns job responsibilities for plant laboratory. • Reviews and interprets tiles and other raw material research data stored in the lab computer; utilizes computer system to generate various reports pertaining to any or all areas of responsibility as assigned. • Participates in air quality inspections and associated air permit responsibilities (where applicable). • Organizes and directs the daily activities of the laboratory. Responsible for conducting and overseeing quality assurance and quality control, and collecting, analysing, and interpreting lab results. • Develop monthly reports interpreting results and highlighting unacceptable measures and liaise with production team for agreeing on doable technical solutions.
Sales Manager	1	Business Dev. Manager	• Organize and coordinate sales representatives' schedules. • Research potential leads from business directories, web searches, or digital resources. • Receive and report on all sales leads. • Supervise sales representatives and assistants. • Answer potential customer questions and follow-up call questions. • Work with sales team when closing sales. • Track weekly, monthly, and quarterly performance and sales metrics. • Meet all sales quotas and goals. • Assist sales representatives, regional agents, and distributors to meet and exceed goals
HR Assistant	1	HRM	• Administer and participate in the evolvement of the rewards program including benefits and perks, compensation, and other forms of recognition. • In partnership with finance and legal, manage and assess all of HR systems. • Ensure all recruitment, hiring, on-boarding and compensation practices comply with applicable law.

Job Title	#	Reports to	Job Purpose
			• Supervise on-boarding practices with an eye towards building a great employee experience. • Implement the employee development and training program for employees and managers. • Adapt and extend performance review framework to include all teams and functions. • Ensure career paths and compensation structure are formally documented and communicated for all roles. • Maintain employees records and ensure compatibility with labour law. Manage the HR & Recruitment inbox emails. • Organize & maintain HR & Recruitment filing system & folders. Telephone work and message taking will apply. • Maintain and review HR & Recruitment platforms, such as LinkedIn Premium Recruiter, intranet, and the website. • Being a first point of contact for employees and new starters on HR & Recruitment related queries.
Administrative Assistant	1	HR Assistant	• Supervising and monitoring the work of administrative staff (Canteen, housekeeping, reception, and staff transport). • Monitor and maintain canteen supplies and daily meals. Manage all transportation requests with excellent timely manner. Ensure enough vehicles available to meet the movement requirements. Organize and ensure vehicles Safety & Registration. Organize the repair of any damage to vehicles. Ensure tracking system for fuel consumption for vehicles is in place. Conduct random inspections of staff vehicles. Any other duties as directed by the HR Manager
Deputy Finance Manager	1	Finance Manager	• Responsible for timely monthly-consolidated financial statements, payments, cash flow for management reporting. Responsible also for preparing, interpreting, and analysing financial reports for monthly, quarterly, and annual accounting periods. • Processing and making payments for cash purchases and creditors' payments once they become due. Reimbursing employees for expenses incurred on behalf of PCL, processing of creditors invoices and reconciling payable accounts to ensure that the creditors listing is fully updated. • Responsible for preparing the monthly aging creditors listing report. Responsible for the administration and documentation of all salaries, wages, bonuses, and deductions (payroll tax, social security) received by employees.
Packing Plant team Leader	1	Plant Manager	• Operation & maintenance of Packing and Loading Unit. Maintain daily operation logs. Look after troubleshooting & quality control, breakdowns.

Job Title	#	Reports to	Job Purpose
			Coordinate with respective departments for the proper functioning of unit. Oversee production training and standard operating procedures. • Adhere to product quality standards and environmental compliance. • Extend assistance to the maintenance technicians during maintenance jobs execution.
Deputy Mechanical Section Head	1	Production & maintenance Manager	• To undertake PM, breakdown, and planned maintenance activities on all equipment. • To operate the maintenance system in an efficient manner in accordance with instructions, procedures, and protocols. • To keep the Production and maintenance Manager and Control Room Supervisor informed of urgent spare part requirements and asset / service or breakdowns that could affect the business in any way. • To use the Stores and spare parts resources in accordance with any relevant company procedures and policies, and that spare parts procedures are adhered to. • Manage contractors in a safe manner, • Coordinating and scheduling preventive and corrective maintenance works and allocate tasks for his team, as well as ensuring quality work by close monitoring and follow up for implementation
Electrical Section Head	1	Plant Manager	• As above, but all activities are under the supervision of the Plant Manager.
Electrical Team Leader	1	Electrical Section Head	• As above.
Electrical Technician	1	Electrical Team Leader	• Responsible for performing highly diversified duties to install, troubleshoot, repair, and maintain production and facility equipment according to safety, predictive and productive maintenance systems, and processes to support the achievement of the plant's business goals.
Mechanical technician	2	Deputy Mechanical Section Head	• Maintain, repair, install, and upgrade electrical equipment, components, tools, and machinery of the production line. • Work on site to keep machinery and equipment running correctly.
Forklift Driver	1	Plant Manager	• Operate powered industrial trucks to load and unload materials and deliveries and move them to and from storage areas, machines and loading docks, into trucks

Job Title	#	Reports to	Job Purpose
			or storage facilities.
Security officer	1	HRM	• Secure premises and personnel by patrolling all facilities; monitoring surveillance equipment; inspecting buildings, equipment, and access points; permitting entry. • Obtains help by sounding alarms. • Maintains security environment by monitoring and setting building and equipment controls.

Labour Cost

Dept.	Position	#	Reports to	Annual Salary Package (US$)[8]
BOD	Chairman & CEO	1	Board of Directors	120,000
Executive Management				
	Managing Director	1	Chairman & CEO	10,800
	PAA/Executive Secretary	1	Managing Director	120,000
Operations Dept.				
	Plant Manager	1	Managing Director	72,000
	Production and maintenance Manager	1	Plant Manager	72,000
	CCR Operator - Expert	2	Plant Manager	60,000
	Production Section Head	1	Production and maintenance Manager	27,600
	Electrical Section Head	1	Plant Manager	27,600
	Deputy Mechanical Section Head	1	Production and maintenance Manager	21,600
	Instrumentation Team Leader	1	Plant Manager	18,000
	Equipment maintenance team leader	1	Production and maintenance Manager	16,800
	Packing Plant team Leader	1	Plant Manager	14,400
	Electrical Team Leader	1	Electrical Section Head	16,800
	Production Team Leader	2	Production and maintenance Manager	33,600
	Excavator Operator	2	Plant Manager	28,800
	Mechanical fitter and turner	1	Production and maintenance Manager	12,000
	Forklift Driver	1	Plant Manager	4,800
	Welder	1	Electrical Team Leader	3,600
	Bag Placer	6	Production Section Head	18,000
	Bulldozer Operator	1	Production Section Head	6,000
	CCR Operators	3	CCR Operator - Expert	14,400

[8] Salaries are projected to increase annually based on inflationary factor, beginning year 1.

	Crane Operator	2	Production Section Head	9,600
	Electrical Technician	1	Electrical Team Leader	3,000
	Electrician	1	Electrical Technician	7,200
	HSSE Officer/Manager	1	Managing Director	10,800
	HSSE Assistant	1	HSSE Officer/Manager	9,600
	Instrumentation Technician	2	Electrical Team Leader	10,800
	Junior Mechanical	1	Instrumentation Technician	10,800
	Lubricator	1	Production Section Head	9,000
	Mobile Eqpt Electrician	1	Electrical Team Leader	7,200
	Mechanical technician	2	Deputy Mechanical Section Head	14,400
	Mechanician	1	Deputy Mechanical Section Head	5,400
	Patroller	6	Production Section Head	14,400
	Plumber	1	Production Section Head	4,800
	Shift Supervisor/Dispatcher	1	Production Section Head	9,000
	Wheel Loader Operator	1	Production Section Head	6,000
	Workshop Machinist	1		5,400
	Bag Shifter	4	Production Section Head	6,240
Quality Department				
	Quality Manager	1	Managing Director	54,000
	Chief Chemist	1	Quality Manager	18,000
	Deputy Chief Chemist	1	Deputy Chief Chemist	12,000
	Chemical Lab Technician	3	Deputy Chief Chemist	27,000
	Lab Operator	3	Deputy Chief Chemist	9,000
	Physical Lab Technician	2	Deputy Chief Chemist	6,000
Business Development				
	Business Dev. Manager	1	Managing Director	54,000
	BD Officer	1	Business Dev. Manager	10,800
	Sales Manager	1	Business Dev. Manager	48,000
	Zonal Sales Executive	7	Sales Manager	75,600
	Dispatcher Officer	2	Sales Manager	12,000
	Logistics out bound	3	Sales Manager	32,400
	Zonal Regional Driver	7	Zonal Sales Executive	16,800
	Sales Analyst	2	Sales manager	21,600
	Sales Assistant	7	Sales manager	63,000
	Sales Executives (HQ)	2	Sales manager	18,000
	Logistics in bound	2	Business Dev. Manager	10,800
	Procurement Officer	1	Business Dev. Manager	10,200
	Store Officer	1	Business Dev. Manager	7,200
	Weighbridge Operator	3	Sales Manager	54,000

Human Resources Dept.				
	HRM	1	Managing Director	24,000
	HR Assistant	1	HRM	9,000
	IT Officer	1	HRM	11,400
	Security officer	1	HRM	11,400
	Administrative Assistant	1	HR Assistant	9,000
	Driver	6	HR Assistant	21,600
	Security Assistant	2	Security officer	7,200
Finance Department				
	Finance Manager	1	Managing Director	30,000
	Deputy Finance Manager	1	Finance Manager	24,000
	Senior Accountant	1	Deputy Finance Manager	16,800
	Accounts Assistants	3	Senior Accountant	36,000
	Cashier	1	Deputy Finance Manager	6,000
	Treasury Officer	1	Senior Accountant	6,000
		135	***Total Annual Package***	**$1,563,240**

Annual Labour Cost by Department

Table 8: Annual Labour Costs per Department

US$' 000	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**	**Y8**
Chairman, CEO & Management	218	221	225	228	231	235	218	221
HR Dept.	95	96	98	99	101	102	95	96
Finance Department	121	122	124	126	128	130	121	122
Operations Dept.	621	630	640	649	659	669	621	630
Quality Department	128	130	132	134	136	138	128	130
Business Development	404	410	417	423	429	436	404	410
TOTAL	**1,587**	**1,610**	**1,635**	**1,659**	**1,684**	**1,709**	**1,587**	**1,610**

The Job Description of the Managing Director

Overall purpose of the Job	Responsible for developing short, mid, and long-range strategy for the plant and ensure successful implementation.
Reporting Line	Chairman/CEO
Accountability	This position has full P&L responsibility. Obtains profit contribution by managing team, and establishing and accomplishing business objectives.
Primary Duties	• Formulates with his team the strategy for the plant including the annual business plans in line with the region, country objectives for that year; organizes board approval and executes the plans in such a way that the set objectives are achieved. • Contributes to the region, country strategy together with the Executive Management Team. • Ensures that the separate annual operational plans of the various disciplines like Sales & Marketing, Operations, Finance and Human resources are in tune with each other, well formulated and approved so that the resulting overall plan constitutes a solid platform for achieving the annually agreed objectives (ROCE, investment budget, market

	position/growth) • Strives to integrate / streamline the plant operations • Sees to it that progress/results are developing in line with the plans; that the various disciplines cooperate in a positive atmosphere so that maximum productivity will be achieved. Where and when necessary the MD will take corrective actions • Works closely with the Plant Manager to ensure that the production process runs smoothly and efficiently both from the angle of infrastructure (quality/maintenance equipment) and staffing (number plus education/training) • Sees to it that the Sales (correct forecast system) and Production (allocation) cooperate closely to ensure that the available capacity is used optimally. Controls the production costs • Works closely with Business Development Manager/Sales Manager to ensure a maximum sales volume with the right margins and a high level of customer satisfaction. Pays visit to some key customers regularly to stay in touch with the market • Makes sure that the required corporate reporting is done in time and on the right quality level. • Promotes and ensures compliance with the Company's values and management principles • Develops and steers an efficient health, security, safety and environmental (HSSE) protection process • Represents the company in the local community. Lobbies to safeguard the interests of the plant. Takes part in associations to protect the company's interests in public and to acquire information • Advise, in the first instance, the Chairman/CEO at the earliest opportunity of any concerns he may have regarding the performance of his team and/or its processes • Strives to build a high-performance team by recruiting, selecting, orienting, training, coaching, counselling, and disciplining managers; communicating values, strategies, and objectives; assigning accountabilities; planning, monitoring, and appraising job results; developing incentives; developing a climate for offering information and opinions; providing educational opportunities • Leads by example - shows what good leadership looks like • Keep up to date on professional and technical knowledge by attending educational workshops; reviewing professional publications; establishing personal networks; benchmarking state-of-the-art practices; participating in professional societies. New development and foster learning & development among the team • Any other duties that he may be assigned by the Board
Skills, Knowledge and Experience	• English is a must • Excellent interpersonal & communication skills, dealing with individuals at all levels • Capable of evaluating financial alternatives and recognize and interpret financial trends and performance • Computer proficiency - MS Office • BA/BSc degree or higher. Masters degree in relevant field of operations will be an added advantage • Proven leadership skills and ability to motivate & develop his/her team • Self-motivated and committed individual, strong work ethic

	• High energy, with the ability to work in fast-paced environment • Excellent analytical skills, strong financial knowledge, methodical approach, and strong commercial acumen • 10+ years' relevant practical experience, including ideally 3 - 5 years of experience in Cement Manufacturing plant (experience in African market would be an added advantage)
Complexity and Creativity	• Ability to work with various stakeholders to resolve challenges • Ability to work with various facilities and functions (operations, finance, quality) across the Division to resolve challenges • Capable of building strong relationships internally & externally • Able to drive team to continuously improve processes and foster good working relationships
Judgment and Decision making	• Capable of defining, developing and implementing short, mid-term and long term objectives & goals for the team - set clearly defined targets for team • Provides sound information to the Chairman & CEO, assisting him in his decision making process • Use sound commercial judgment in all dealings with external providers
Supervisory Responsibility	• Carries out supervisory responsibilities in accordance with the organization's policies and applicable laws. • Responsibilities include training employees; planning, assigning, and directing work; appraising performance; rewarding and disciplining employees; conflict resolution; team building; coaching and leading employees to improve; addressing complaints and resolving problems; documentation; and setting an example of superior behaviour, attitude and performance.
Physical Demands	• To successfully perform the essential functions of this role it requires the ability to: stand occasionally, walk frequently, frequent use of hands (reach with hands and arms), view computer monitor, use telephone, speak, and hear on a frequent basis.
Contacts	• The MD will have regular phone/fax/e-mail contact with colleagues, customers, suppliers etc. • The MD shall be based in Kahama, Shinyanga, Tanzania.

Financial Plan

Assumptions and Projections

In this section, using Microsoft Excel we developed a base case scenario financial model to test the viability of the project. Detailed financial projections including key assumptions, statement of comprehensive income statement, cash flow and financial position are included in this Section. The following key assumptions underlie the financial projections:

a) General

(i) Financial projections are in US$ for 7-year period with terminal values calculated to perpetuity to take into account all cashflows that will be generated by PCL beyond the 7-year period.

(ii) US$/TZS exchange rate is US$1/TZS 2,325.90

(iii) Depreciation is calculated using straight-line method.

(iv) Repair and maintenance for plant are estimated to 1% in year of operations then increase by 5% on year-by-year basis;

(v) No dividend is payable to shareholder during loan tenure; and

(vi) Corporate tax and VAT are assumed to remain at the current rates of 30% and 18% respectively.

(vii) Debtors-days are estimated at 45 days and creditors-days are projected at 31 days;

(viii) Exports of cement to amount to 25% of the cement produced, generating enough hard currency to pay for dollar denominated obligations.

b) Loan Financing Terms

(i) Project cost is estimated to US$64.7m with US$2.2m as IDC, preliminary expenses and initial working capital is now US$3.5m;

(ii) Loan amount sought from financial institutions for the cement project is estimated at **US$42.0 million.**

(iii) Interest during construction (IDC) is capitalised in line with IAS.

(iv) All project cost is capitalized except US$3.5m marked for initial working capital and preliminary expenses

(v) Proposed loan tenure (door to door) is 7 years. Loan repayment period – 6 years payable in equal monthly instalments falling due and payable after the commercial date (COD);

(vi) Interest rate to be set at 3-months LIBOR lending rate plus 5% margin;

(vii) Other likely Facility Fees that are normally charged to this type of facility:

- Term Loan - Facility Fees (% of Loan Disbursed) estimated at 0.5%
- Term Loan - Annual Management fees (% of Outstanding amount) estimated at 0.5%
- All-in Fee to all Parties - One off fees (% of Loan amount) estimated at 0.75%

c) Depreciation

	Depreciation charges
Land & Site Development	10%
EP + Transportation	5%
Civil Construction, Erection and Installation, Commissioning	5%
Pre-Operating Exp., Working Capital & IDC	10%

Project Overall Cost

Overall project costs is estimated to amount to US$64.7million and it is proposed to be financed as follows:

Loan and Equity Funded Assets

Table 9: Project Overall Cost

Summary	US$
Land & Site Development	$2,000,000
EP + Transportation	$20,000,000
Civil Construction, Erection and Installation, Commissioning	$37,000,000
Pre-Operational Expenses & Initial Working Capital	$3,500,000
Interest During Construction (IDC)	$2,205,000
TOTAL CAPEX	**$64,705,000**

Capital Structure

The project capital for the project is depicted in Figure 18 and Table 10 below:

Figure 18: Proposed Capital Structure

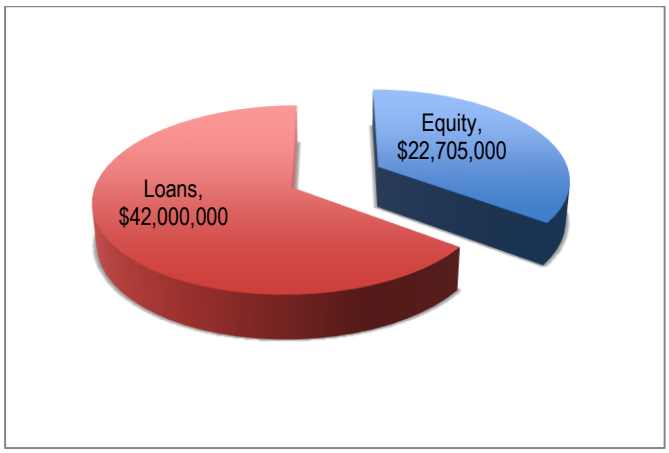


Table 10: Capital Structure

Source of Funding	US$	Contribution (%)
Equity from Shareholders	$22,705,000	**35%**
Term Loans from banks	$42,000,000	**65%**
TOTAL CAPEX	**$64,705,000**	**100%**

Statement of Sources and Uses of Funds

	PCL	*Bank Loan*	
Items	Paid/To be paid	To be Paid	**TOTAL (US$)**
CAPEX DETAILS			
Land and related preliminary Exp.	2,000,000	-	**2,000,000**
Site preparation	1,900,000	-	**1,900,000**
Steel structures & Carpentry works	3,540,000	2,360,000	**5,900,000**
Electrical & Mechanical Installation	-	6,500,000	**6,500,000**
Civil Works	9,760,000	12,940,000	**22,700,000**
EP + Transportation	500,000	19,500,000	**20,000,000**
Pre Operations & Initial WC	2,800,000	700,000	**3,500,000**
IDC	2,205,000	-	**2,205,000**
PROJECT CAPITAL COST	**$22,705,000**	**$42,000,000**	**$64,705,000**

Loan Details

PRIME CEMENT LIMITED								
LOAN SCHEDULE								
Term Loan Tenor		7	years					
Interest rate (3-months LIBOR +margin)		**5.25%**	per annum					
Terms on Loan								
Loan Tenor (door-to-door)		7	years from date of disbursement					
Loan repayment Period (years)		6	Years					
Number of instalments per year		12	instalments					
Monthly Repayment (Loan + Interest)		**$695,084**	per months					
Total number of instalments		**72**	**instalments**					
Grace Period (Years)		1						
Project Year		***0***	***1***	***2***	***3***	***4***	***5***	***6***
	Year	***2022***	***2023***	***2024***	***2025***	***2026***	***2027***	***2028***
Long - Term Bank Loan								
Loan Amount		42,000,000	-	-	-	-	-	-
Starting Balance		-	42,000,000	35,863,992	29,405,844	22,608,643	15,454,590	7,924,948
Loan Repayment		-	(6,136,008)	(6,458,148)	(6,797,201)	(7,154,054)	(7,529,642)	(7,924,948)
Interest Expense		-	(2,205,000)	(1,882,860)	(1,543,807)	(1,186,954)	(811,366)	(416,060)
Total Repayment		**-**	**(8,341,008)**	**(8,341,008)**	**(8,341,008)**	**(8,341,008)**	**(8,341,008)**	**(8,341,008)**
Ending balance		**$42,000,000**	**$35,863,992**	**$29,405,844**	**$22,608,643**	**$15,454,590**	**$7,924,948**	**$0**
Term Loan - Facility Fees (% of Loan Disbursed)		(210,000)	-	-	-	-	-	-
Term Loan - Annual Management fees (% of Outstanding amount)		-	(210,000)	(179,320)	(147,029)	(113,043)	(77,273)	(39,625)
All-in Fee to all Parties - One off fees (% of Loan amount)		(315,000)	-	-	-	-	-	-
Total Bank Loan fees and charges		**(525,000)**	**(210,000)**	**(179,320)**	**(147,029)**	**(113,043)**	**(77,273)**	**(39,625)**

Depreciation & Amortisation Schedule

PRIME CEMENT LIMITED								
FIXED ASSETS DEPRECIATION SCHEDULE								
Calendar Year		*2022*	*2023*	*2024*	*2025*	*2026*	*2027*	*2028*
Project Year		*0*	*1*	*2*	*3*	*4*	*5*	*6*
FIXED ASSETS	**US$**							
LAND & SITE DEV.								
Opening Balance		-	2,000,000	1,800,000	1,600,000	1,400,000	1,200,000	1,000,000
Additions and replacements		2,000,000	-	-	-	-	-	-
Disposals		-	-	-	-	-	-	-
Cumulative Assets		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
End of Assets life		-	-	-	-	-	-	-
Net asset to depreciate		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Depreciation		-	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)
Accumulated Depreciation		-	(200,000)	(400,000)	(600,000)	(800,000)	(1,000,000)	(1,200,000)
Closing net book value		**2,000,000**	**1,800,000**	**1,600,000**	**1,400,000**	**1,200,000**	**1,000,000**	**800,000**
Capital Allowance		-	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)
PLANT & EQUIPMENT								
Opening Balance		-	57,000,000	51,300,000	45,600,000	39,900,000	34,200,000	28,500,000
Additions and replacements		57,000,000	-	-	-	-	-	-
Disposals		-	-	-	-	-	-	-
Cumulative Assets		57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000
End of Assets life		-	-	-	-	-	-	-
Net asset to depreciate		57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000	57,000,000
Depreciation		-	(5,700,000)	(5,700,000)	(5,700,000)	(5,700,000)	(5,700,000)	(5,700,000)
Accumulated Depreciation		-	(5,700,000)	(11,400,000)	(17,100,000)	(22,800,000)	(28,500,000)	(34,200,000)
Closing net book value		**57,000,000**	**51,300,000**	**45,600,000**	**39,900,000**	**34,200,000**	**28,500,000**	**22,800,000**
Capital Allowance		-	(2,850,000)	(2,850,000)	(2,850,000)	(2,850,000)	(2,850,000)	(2,850,000)
Pre-Ops & Initial Working Capital+IDC								
Opening Balance		-	5,705,000	5,134,500	4,564,000	3,993,500	3,423,000	2,852,500
Additions and replacements		5,705,000	-	-	-	-	-	-
Disposals		-	-	-	-	-	-	-
Cumulative Assets		5,705,000	5,705,000	5,705,000	5,705,000	5,705,000	5,705,000	5,705,000
End of Assets life		-	-	-	-	-	-	-
Net asset to depreciate		5,705,000	5,705,000	5,705,000	5,705,000	5,705,000	5,705,000	5,705,000
Depreciation		-	(570,500)	(570,500)	(570,500)	(570,500)	(570,500)	(570,500)
Accumulated Depreciation		-	(570,500)	(1,141,000)	(1,711,500)	(2,282,000)	(2,852,500)	(3,423,000)
Closing net book value		**5,705,000**	**5,134,500**	**4,564,000**	**3,993,500**	**3,423,000**	**2,852,500**	**2,282,000**
Capital Allowance		-	(570,500)	(570,500)	(570,500)	(570,500)	(570,500)	(570,500)
Additions and replacements		**64,705,000**	**-**	**-**	**-**	**-**	**-**	**-**
Disposals		**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total depreciation		**-**	**(6,470,500)**	**(6,470,500)**	**(6,470,500)**	**(6,470,500)**	**(6,470,500)**	**(6,470,500)**
Total closing net book value		**64,705,000**	**58,234,500**	**51,764,000**	**45,293,500**	**38,823,000**	**32,352,500**	**25,882,000**
Total capital allowances		**-**	**(3,620,500)**	**(3,620,500)**	**(3,620,500)**	**(3,620,500)**	**(3,620,500)**	**(3,620,500)**

Administrative expenses

Table 11: Administration Expenses

($' 000)	2023	2024	2025	2026	2027	2028
Salaries & Wages	434	440	447	453	460	467
Admin Office: Utilities (Electricity & Water)	32	51	58	59	60	60
Internet (Site + Head Offices)	18	19	19	19	19	20
Audit fees	25	26	26	27	27	27
Insurance (% age of PPE)	1,041	940	834	726	614	499
Office Rental (Corporate Office)	58	58	58	58	58	58
Sales and Marketing expenses	20	21	21	21	22	22
Vehicle fuel and maintenance (admin.)	49	76	87	88	89	91
Office supplies and stationery	6	6	6	6	6	7
Miscellaneous expenses (as % age of sales)	32	51	58	59	60	60
TOTAL OPEX	**$1,716**	**$1,687**	**$1,613**	**$1,515**	**$1,414**	**$1,310**

Projected Income Statement

PRIME CEMENT LIMITED							
Projected Income Statement							
Calendar Year	2022	2023	2024	2025	2026	2027	2028
Project Year	-	*1*	*2*	*3*	*4*	*5*	*6*
Revenue (US$)							
Revenue from Cement Sales	-	63,958,264	98,844,589	110,473,365	110,473,365	110,473,365	110,473,365
Other Income	-	-	-	-	-	-	-
Total Revenue	**-**	**63,958,264**	**98,844,589**	**110,473,365**	**110,473,365**	**110,473,365**	**110,473,365**
Cost of Sales	-	(43,620,278)	(66,801,499)	(74,540,364)	(74,558,183)	(74,576,269)	(74,594,626)
Gross Profit	**-**	**20,337,986**	**32,043,090**	**35,933,001**	**35,915,182**	**35,897,096**	**35,878,738**
GP Margin	*0%*	*32%*	*32%*	*33%*	*33%*	*32%*	*32%*
Operating Expenses (US$):							
General and Administration	-	(1,716,239)	(1,686,569)	(1,613,076)	(1,515,413)	(1,414,470)	(1,310,170)
Maintenance Costs (Machinery)	-	(639,583)	(1,037,868)	(1,217,969)	(1,278,867)	(1,342,811)	(1,409,951)
Total Operating Expenses	**-**	**(2,355,822)**	**(2,724,437)**	**(2,831,045)**	**(2,794,280)**	**(2,757,280)**	**(2,720,121)**
Operating Profit (EBITDA)	**-**	**17,982,165**	**29,318,653**	**33,101,956**	**33,120,902**	**33,139,815**	**33,158,617**
Depreciation charge	-	(6,470,500)	(6,470,500)	(6,470,500)	(6,470,500)	(6,470,500)	(6,470,500)
EBIT	**-**	**11,511,665**	**22,848,153**	**26,631,456**	**26,650,402**	**26,669,315**	**26,688,117**
Finance Costs (Interest and charges)	-	(2,415,000)	(2,062,180)	(1,690,836)	(1,299,997)	(888,639)	(455,685)
Profit before tax (PBT)	**-**	**9,096,665**	**20,785,973**	**24,940,620**	**25,350,405**	**25,780,676**	**26,232,432**
Corporate tax	-	(3,755,149)	(7,261,942)	(8,508,336)	(8,631,271)	(8,760,353)	(8,895,880)
Net Profit/(Loss) after tax	**-**	**5,341,515**	**13,524,031**	**16,432,284**	**16,719,133**	**17,020,323**	**17,336,552**
Dividend Paid	-	-	-	-	-	-	-
Retained profits (Loss)	-	5,341,515	13,524,031	16,432,284	16,719,133	17,020,323	17,336,552

Projected Statement of Financial Position

PRIME CEMENT LIMITED							
Calendar Year	2022	2023	2024	2025	2026	2027	2028
STATEMENT OF FINANCIAL POSITION							
Project Year	***0***	***1***	***2***	***3***	***4***	***5***	***6***
ASSETS (US$)							
Non-Current Assets							
PPE and other Fixed Assets	64,705,000	58,234,500	51,764,000	45,293,500	38,823,000	32,352,500	25,882,000
Total Non-Current Assets	**64,705,000**	**58,234,500**	**51,764,000**	**45,293,500**	**38,823,000**	**32,352,500**	**25,882,000**
Current Assets							
Trade and other receivables	-	4,835,245	7,472,651	8,351,786	8,351,786	8,351,786	8,351,786
Bank and cash	-	4,038,676	16,681,969	32,489,855	48,525,435	64,486,617	80,368,721
Total Current Assets	**-**	**8,873,921**	**24,154,620**	**40,841,642**	**56,877,221**	**72,838,403**	**88,720,508**
Current Liabilities							
Bank overdraft	-	-	-	-	-	-	-
Trade and other payables	-	3,197,913	4,942,229	5,523,668	5,523,668	5,523,668	5,523,668
Total current Liabilities	**-**	**3,197,913**	**4,942,229**	**5,523,668**	**5,523,668**	**5,523,668**	**5,523,668**
TOTAL NET ASSETS/LIABILITIES	**64,705,000**	**63,910,508**	**70,976,391**	**80,611,474**	**90,176,553**	**99,667,235**	**109,078,839**
Represented by:							
Equity (US$):							
Share Capital Equity)	22,705,000	22,705,000	22,705,000	22,705,000	22,705,000	22,705,000	22,705,000
Accumulated Retained earnings/(loss)	-	5,341,515	18,865,546	35,297,830	52,016,963	69,037,287	86,373,839
Total Shareholder's Funds	**22,705,000**	**28,046,515**	**41,570,546**	**58,002,830**	**74,721,963**	**91,742,287**	**109,078,839**
Non current Liabilities							
Long Term Loans	42,000,000	35,863,992	29,405,844	22,608,643	15,454,590	7,924,948	-
Total Non-current assets	**42,000,000**	**35,863,992**	**29,405,844**	**22,608,643**	**15,454,590**	**7,924,948**	**-**
TOTAL CAPITAL EMPLOYED	**64,705,000**	**63,910,508**	**70,976,391**	**80,611,474**	**90,176,553**	**99,667,235**	**109,078,839**
Balance sheet check	-	-	-	-	-	-	-

Projected Statement of Cash Flow

PRIME CEMENT LIMITED							
Calendar Year	2022	2023	2024	2025	2026	2027	2028
STATEMENT OF CASH FLOW							
Project Year	**0**	**1**	**2**	**3**	**4**	**5**	**6**
Operating Activities (US$)							
Profit / (loss) Before tax	-	9,096,665	20,785,973	24,940,620	25,350,405	25,780,676	26,232,432
Adjustments for:							
Depreciation	-	6,470,500	6,470,500	6,470,500	6,470,500	6,470,500	6,470,500
Interest	-	2,415,000	2,062,180	1,690,836	1,299,997	888,639	455,685
Trade and other receivables	-	(4,835,245)	(2,637,406)	(879,135)	-	-	-
Trade and other payables	-	3,197,913	1,744,316	581,439	-	-	-
Cash From Operating Activities	**-**	**16,344,833**	**28,425,563**	**32,804,259**	**33,120,902**	**33,139,815**	**33,158,617**
Income Taxes Paid	-	(3,755,149)	(7,261,942)	(8,508,336)	(8,631,271)	(8,760,353)	(8,895,880)
Net cash generated from operations	**-**	**12,589,684**	**21,163,621**	**24,295,923**	**24,489,630**	**24,379,462**	**24,262,737**
Investing Activities							
Cement Plant & Equipment	(64,705,000)	-	-	-	-	-	-
Proceeds from disposal	-	-	-	-	-	-	-
Net cash used in investing activities	**(64,705,000)**	**-**	**-**	**-**	**-**	**-**	**-**
Financing Activities							
Shareholders Equity	22,705,000	-	-	-	-	-	-
Loan drawdown	42,000,000	-	-	-	-	-	-
Loan repayment	-	(8,551,008)	(8,520,328)	(8,488,037)	(8,454,051)	(8,418,281)	(8,380,632)
Dividend Paid to shareholders	-	-	-	-	-	-	-
Net cash from financing activities	**64,705,000**	**(8,551,008)**	**(8,520,328)**	**(8,488,037)**	**(8,454,051)**	**(8,418,281)**	**(8,380,632)**
(Decrease)/increase in cash and cash equivalents	-	4,038,676	12,643,293	15,807,886	16,035,579	15,961,182	15,882,105
Cash at the beginning of the year	-	-	4,038,676	16,681,969	32,489,855	48,525,435	64,486,617
Cash at the end of the year	**-**	**4,038,676**	**16,681,969**	**32,489,855**	**48,525,435**	**64,486,617**	**80,368,721**
Free cash flows							
Net cash from operations	-	12,589,684	21,163,621	24,295,923	24,489,630	24,379,462	24,262,737
Less: Capex	(64,705,000)	-	-	-	-	-	-
Free cash flows	**(64,705,000)**	**12,589,684**	**21,163,621**	**24,295,923**	**24,489,630**	**24,379,462**	**24,262,737**
CF Check if same as BS	-	-	-	-	-	-	-

Financial Analysis & Credit Valuation (Base Case)

PRIME CEMENT LIMITED								
Calendar Year		**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Project Year		***0***	***1***	***2***	***3***	***4***	***5***	***6***
PBT (Figures in US$)		-	9,096,665	20,785,973	24,940,620	25,350,405	25,780,676	26,232,432
Depreciation and amortisation		-	6,470,500	6,470,500	6,470,500	6,470,500	6,470,500	6,470,500
Tax paid		-	(3,755,149)	(7,261,942)	(8,508,336)	(8,631,271)	(8,760,353)	(8,895,880)
Change in WC		-	2,415,000	2,062,180	1,690,836	1,299,997	888,639	455,685
Net Free Cash Inflows		**-**	**14,227,015**	**22,056,711**	**24,593,620**	**24,489,630**	**24,379,462**	**24,262,737**
Capital expenditure- CAPEX		(64,705,000)	-	-	-	-	-	-
Loan repayment		-	(8,551,008)	(8,520,328)	(8,488,037)	(8,454,051)	(8,418,281)	(8,380,632)
Terminal Value (TV)		-	-	-	-	-	-	140,498,605
Payment of dividend to shareholders		-	-	-	-	-	-	-
Net Cash Flow		**(64,705,000)**	**(8,551,008)**	**(8,520,328)**	**(8,488,037)**	**(8,454,051)**	**(8,418,281)**	**132,117,973**
Free Net Cashflow		**(64,705,000)**	**5,676,008**	**13,536,383**	**16,105,583**	**16,035,579**	**15,961,182**	**156,380,710**
Discount Rate (WACC)	**19.6%**							
Discounting Factors		1.0000	0.8360	0.6989	0.5843	0.4885	0.4084	0.3414
Free Net Cashflow/outflow		**(64,705,000)**	**5,676,008**	**13,536,383**	**16,105,583**	**16,035,579**	**15,961,182**	**156,380,710**
Discounted Cash Flows		**(64,705,000)**	**4,745,254**	**9,460,970**	**9,410,788**	**7,833,408**	**6,518,500**	**53,392,751**
Pay Back Period (Years)	**5.50**	**Years**						
Projected long-term sustainable growth	2.0%	In line with sector and GDP Growth						
Cost of Capital	19.6%	WACC for Industry average (desk research and consultant estimation)						
NPV (US$) - Including TV		**26,656,672**						
IRR		**28.8%**						

$$WACC = k_e \times W_e + k_d (1 - T_c) \times W_d$$

Cost of Equity (Ke)	30.0%	Estimated Yield based on alternative investment such Risk Free assets
Interest (average market rate - Kd)	20.0%	Estimated based on recent facilities completed around East Africa
Debt Ratio (Wd)	65%	Target Debt
Equity Ratio (We)	35%	
Corporate Tax (T)	30%	Income Tax Act Cap 340 (Tanzania Laws)
WACC	**19.6%**	

Key Ratios

Key financial ratios (Base Case) summarised in the Table 12 below demonstrate a robust business case for Prime Cement Project. Projected financial ratios show that the project will generate sufficient revenues and cash flows from operations throughout the projected period.

All profitability ratios and liquidity ratios are impressive and support the implementation of the project.

Table 12: Key Financial Ratios

Key Ratios:	2023	2024	2025	2026	2027	2028
EBITDA % income	28%	30%	30%	30%	30%	30%
EBIT % income	18%	23%	24%	24%	24%	24%
Net Profit (loss) % income	8%	14%	15%	15%	15%	16%
DSCR - (times)	**1.64**	**2.77**	**3.25**	**3.40**	**3.56**	**3.75**
Interest Cover (times)	26.5	47.9	65.3	85.0	124.3	242.4
Gross Profit Margin	32%	32%	33%	33%	32%	32%
Current Ratio	2.8	4.9	7.4	10.3	13.2	16.1
Return on Equity (%	19%	33%	28%	22%	19%	16%

All the above ratios (calculated at base case scenario) indicate proper financial and operational performance projected by PCL. The interest cover ratio is high enough to secure the reimbursement of financial obligations. Profitability and EBITDA Margins are higher than the cost of capital.

Return on Investment

ROI, Return on Investment = (Average Net Profit / Capital)* 100% = **19.1%**

Project Financial Feasibility

Discounted Cash Flow

The DCF valuation model is based on discounted free cash flows using Weighted Average Cost of Capital (WACC) of **19.6%** calculated using the following equation:

$$WACC = k_e \times W_e + k_d (1 - T_c) \times W_d$$

Where:

$WACC$ = Weighted Average Cost of Capital

k_e = Cost of Equity

k_d = Cost of Debt

W_d = the proportion of debt on total financing

W_e = proportion of equity to total financing

T_c = Corporate Tax

The DCF valuation results, Pay Back Period, IRR and NPV are discussed briefly below.

Net Present Value (NPV)

The project Net Present Value (NPV) is calculated assuming a discount rate (obtained as a weighted average cost of capital – WACC) of **19.6%,** as calculated in Annex 2. As per standard practice the DCF valuation of business viability we have calculated the NPV including Terminal Value (TV) to account for future cashflows beyond the projection period (year 6). The NPV for the project at the base case scenario is **US$26.7 million** suggesting that the project is feasible.

Internal Rate of Return (IRR)

The Internal Rate of Return (IRR) of the project is an indicator for the project's profitability. For a project to be financially viable, the IRR should be greater than the cost of capital (WACC).

The IRR for the project at the base case scenario is **28.8%**, which is higher than the cost of capital (WACC) of 19.6% suggesting that the project is financially viable and feasible.

Payback Period

Payback Period (years) = 5+(26,736,080/ 53,392,751)= **5.5 years**

Sensitivity Analysis

Scenario Analysis

A pessimistic scenario is applied to verify the project tolerance towards external environmental risks. This scenario is reflected in the first three operating years by a drop in sales demand because of a slower market recovery from Covid-19 as follows:

Scenarios	2023	2024	2025
Capacity Utilisation lower due to Demand Drop (%)	15%	10%	5%
Planned Sales ($' 000)	63,958	98,845	110,473
Scenario Sales ($' 000)	54,365	88,960	104,950

Results of the Pessimistic Scenario

Revenue ($' 000)	2023	2024	2025	2026	2027	2028
Revenue from Cement Sales	54,365	88,960	104,950	110,473	110,473	110,473
Other Income	-	-	-	-	-	-
Total Revenue	**54,365**	**88,960**	**104,950**	**110,473**	**110,473**	**110,473**
Cost of Sales	(37,250)	(60,238)	(70,873)	(74,558)	(74,576)	(74,595)
Gross Profit	**17,114**	**28,722**	**34,077**	**35,915**	**35,897**	**35,879**
Operating Expenses ($ '000):						
General and Administration	(1,699)	(1,669)	(1,603)	(1,515)	(1,414)	(1,310)
Maintenance Costs (Machinery)	(544)	(934)	(1,157)	(1,279)	(1,343)	(1,410)
Total Operating Expenses	**(2,243)**	**(2,603)**	**(2,760)**	**(2,794)**	**(2,757)**	**(2,720)**
Operating Profit (EBITDA)	**14,871**	**26,119**	**31,317**	**33,121**	**33,140**	**33,159**

Economic Analysis

NPV ($' 000)	$22,541
IRR	27.2%
Payback Period (years)	5.58
ROI	17.8%

- The project is still able to generate sufficient cash to cover debt service and secure 5.58 years of pay back period, which is shorter than the loan repayment period.

Annexes

Annex 1: Certificate of Compliance

C.1

TANZANIA

BRELA
BUSINESS REGISTRATIONS AND LICENSING AGENCY

Certificate of Compliance

with Section 435 of the Companies Act, 2002

No: 149340955

I HEREBY CERTIFY THAT

PRIME CEMENT LTD

which is incorporated in **RWANDA** has this day complied with the provisions of Section 435 of the Companies Act, 2002.

GIVEN under my hand at Dar es Salaam this **13th** day of **JANUARY TWO THOUSAND AND TWENTY ONE**.

REGISTRAR OF COMPANIES
TANZANIA

PRINC ASST. REGISTRAR OF COMPANIES

Annex 2: Calculation of Applied Discount Rate

An essential part of the DCF methodology is the discounting of future cashflows to reflect the fact that present earnings are valued more highly than future earnings. The discount rate is calculated to reflect the opportunity cost of the investment funds, which is a function of both the financial structure and perceived risk of investment. The normal calculation of the discount rate is explained in details below.

The Cost of Debt

The rate applied to determine the cost of debt (k_d) should be the current market rate the company is paying on its debt. No records have been made available to test the perception of the banks in terms of lending money to PCL as such we have used the most recently quoted interest rate margins on Bank of Tanzania lending rate of 13.9% per annum. Cost of debt is higher in line with credit risk and operational risks banks are projecting as well as regulatory cost on NPL management. The cost of debt is estimated to be close to BOT lending rate plus a margin at 18%.

The Cost of Equity

Unlike debt, which would have compelled PCL to pay a set rate of interest, equity does not have a concrete price that the company must pay. But that doesn't mean that there is no cost of equity. Equity shareholders expect to obtain a certain return on their equity investment in a company. From the PCL 's perspective, the rate of return equity holders' would require is a cost, because if PCL does not deliver this expected return, shareholders will simply sell their shares, causing the price to drop impacting on market capitalisation value.

Therefore, the cost of equity (k_e) is basically what it would cost the PCL to maintain a share price that is satisfactory as a limited company. The most commonly accepted method for calculating cost of equity is known as **Capital Asset Pricing Model** (CAPM) calculated using the following formula:

$$Cost\ of\ \ Equity\left(k_e\right) = R_f + \beta\left(R_m - R_f\right)$$

Where:

R_f - ***Risk-Free Rate*** or the amount obtained from investing in securities considered free from credit risk, such as government bonds from developed countries.

β - ***Beta,*** *which is used to measure how,* much a company's share price moves against the market as a whole;

$\left(R_m - R_f\right)$ **-** ***Equity Market Risk Premium*** - The equity market risk premium (EMRP), which represents the returns investors expect, over and above the risk-free rate, to compensate them for taking extra risk by investing in the stock market.

This equation measures the risk premium on the equity market and multiplies this by the beta ratio, which measures the riskiness of the investment under consideration. Beta ratios are determined by the volatility of a share price relative to the whole equity market.

Beta measures the risk or volatility of a company's share price in comparison to the market as a whole. For example, a company with a beta of 1.1 will theoretically see its stock price increase by 1.1% for every 1% increase in the market. Put differently, if you're expecting the overall market to return 20%, a stock with a beta of 1.5 should return 30%.

Beta is an important metric used in the Capital Asset Pricing Model (CAPM) to effectively calculate a company's cost of equity that in turn, is applied in numerous valuation models.

A company's beta can be calculated from market observations. However, since leverage (debt) can have a significant impact on a company's stock price, one needs to unlever the beta to remove these effects. The unlevered beta can then be analysed against the unlevered betas of comparable companies that operate in a similar industry. This allows an analyst to select the appropriate beta the represents the true risk of operating in that industry.

Cost of Equity = Beta x market Premium + Risk-free rate +Additional risk adjustments

Based on estimates by DSE for TPCC we consider the cost of equity for PCL to be in the region of 25% and 30%. Given the fact that PCL is a new entrant in the Tanzania market we take the higher cost of equity to be a representative of k_e for PCL.

Weighted Average Cost of Capital:

The discount rate is then calculated using the Weighted Average Cost of Capital (WACC) approach on a post-tax basis in order to take into account the tax shield benefit of debt. In the formulation below, the tax shield benefit of debt is reflected in the WACC by converting k_d to a post tax value with the application of the $(1-T_c)$ factor, which is then combined with k_e (already a post tax value) to produce a weighted average of the post tax value. This is based upon an estimation of the cost of capital of the project, combining the cost of debt with the cost of equity. This notwithstanding, we have assumed that the financing structure of the cement plant will be constituted by, debt to *PCL* through term loans from local banks, which will account for 60% debt for the project to be sought from long-term lenders such as NCBA, which has shown some intent.

The **cost of capital** or WACC is then calculated using the following equation:

$$WACC = k_e \times W_e + k_d(1-T_c) \times W_d$$

Where:

$WACC$ = Weighted Average Cost of Capital

k_e = Cost of Equity

k_d = Cost of Debt

W_d = the proportion of debt on total financing

W_e = proportion of equity to total financing

T_c = Corporate Tax

$WACC = 30\% \times 40\% + 18\%(1-.30) \times 60\%$

= 12.0% + 7.56%

= 19.56%

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