



**Pre-feasibility Study**

# **PLASTER OF PARIS PLANT**

**February 2021**

*“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”*

**Small and Medium Enterprises Development Authority**  
Ministry of Industries and Production  
Government of Pakistan

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## 1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before taking any decision to act upon the information.

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### ***Document Control***

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## 2 EXECUTIVE SUMMARY

Plaster of paris is a quick-setting gypsum plaster consisting of a fine white powder which hardens when moistened and allowed to dry. Plaster of Paris is extensively used in the ceramic industry for preparation of models and moulds, as raw material for manufacture of chalk crayons, gypsum, plaster boards, decorative frames, besides a wide range of applications in interior decoration of buildings including ceiling designing and wall fillers etc. There is considerable rising demand for Plaster of Paris from the general and corporate consumers.

This proposed pre-feasibility study presents an investment opportunity for establishing a plant for processing of gypsum to produce Plaster of Paris. The unit is proposed to be located at the adjoining areas of major cities of Khyber Pakhtunkhwa and Baluchistan like Peshawar, Dera Ismail Khan, Kohat, Quetta, Lora Lai and Sibi. Since the demand of plaster of paris are generally high in major cities so the unit is recommended to be located near above cities.

Production capacity of the proposed Plant is 10,500,000 Kgs per year (5,000 Kgs / Hour) based on 300 working days on single 8 hours shift. The unit will be equipped with modern machinery and equipment including grinding machines, roller, dryer machine and hammer crusher, etc.

The total project cost for setting up a plant is estimated at Rs. 36.965 million out of which Rs. 32.219 million is capital cost and Rs. 4.747 million is working capital. Considering all the assumptions on which the pre-feasibility has been made, the project generates an IRR, Payback and Net Present Value of 40%, 3.64 years and Rs. 59.006 million respectively as on 100% equity financed model. The project will provide employment opportunities to 28 people including the Owner. The legal status of this project is assumed to be 'Sole Proprietorship'.

## 3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services

include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

#### 4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **“Plaster of Paris Plant”** by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later, which form basis of any Investment Decision.

#### 5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Plaster of Paris or simply plaster, is used as a building material similar to mortar or cement. Like those materials plaster starts as a dry powder that is mixed with water to form a paste which liberates heat and then hardens. Plaster is also used for interior decoration. There is growing industrial activity in the field of white ware, such as pottery, sanitary ware, chemical and electrical porcelains, requiring large quantities of plaster of paris for making moulds. The demand for the product is ever increasing.

Gypsum plaster and its products are energy saving, fire resistant, good insulating, cost effective and possess excellent thermal, acoustical and aesthetic properties. Hence, use of gypsum plaster makes a strong case for its manufacturing.

The unit can be set-up in any major cities of Khyber Pakhtunkhwa and Baluchistan with significant population such as Peshawar, Dera Ismail Khan, Kohat, Quetta, Lora Lai and Sibi. The proposed unit will be equipped with modern machinery and equipment including grinding machines, roller and dryer machine and hammer crusher etc. which would be procured locally.

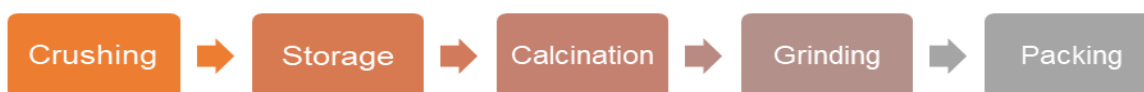
It is expected that the market will continue to grow in the coming period. The proposed project will provide employment opportunity to 28 people including the owner himself. The legal status is proposed to be 'Sole Proprietorship'.

### 5.1 Production Process Flow

Plaster of Paris making process starts from crushing large gypsum rocks to smaller sizes that are subsequently easier to handle. The rock which has undergone primary crushing is stored to ensure production continuity, and optimal homogeneity between rock extraction batches. Next the gypsum is heated and calcinated through the partial or total dehydration of gypsum at a temperature ranging from 120 to 400 degrees centigrade.

The structure and properties of the final product are directly dependent on the chosen calcinations conditions (temperature, pressure, rapidity). Following the calcinations process, the plaster is ground to obtain a powder. Particle size distribution is an important factor in the product properties. The packaging item chosen for the product should give optimal protection and guarantees the product quality all the way to end-user.

**Figure 1 Production Proces Flow**



### 5.2 Installed and Operational Capacities

Total installed capacity of the project based on single 8 hours shift for 300 working days is 10,500,000 Kgs per year. The initial operational capacity of the project will be 70% with an annual growth of 5%. Maximum capacity utilization of the project (i.e 95%) will be achieved in 6<sup>th</sup> year of operations.

**Table 1: Installed and Operational Capacity**

Description	Total Capacity	Operational Capacity 70 % (Year 1)
Plaster of Paris (Kgs)	10,500,000	7,350,000

## 6 CRITICAL FACTORS

- ⇒ Selection of superior quality gypsum from the mines and appropriate arrangements for transportation to the processing facility.
- ⇒ Selection of Energy efficient Machinery & equipment.

- ⇒ Appropriate storage and distribution arrangements of the product in the local market.
- ⇒ Properly trained staff should be engaged and comprehensive staff training programs to be adopted for capacity building.
- ⇒ Reasonable & competitive prices with respect to brand positioning.
- ⇒ Efficient promotion of product through various marketing activities.
- ⇒ Emphasizing on excellent services to its customers such as standardized products and timely order fulfillment.

## 7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Proposed location for setting up a Plaster of Paris Plant largely depends on the easy access to raw material. Moreover, factors like availability of skilled labor, utilities connections and easy access to the target markets should also be carefully examined while setting up this unit. For this pre-feasibility study, the Plant can be set-up in any major cities (cluster i.e Peshawar, Dera Ismail Khan, Kohat, Quetta, Lora Lai and Sibi ) near Gypsum mines or processing cluster.

## 8 POTENTIAL TARGET CUSTOMERS / MARKETS

The potential target market for the plaster of paris will be the general public and corporate customers. In addition to Pakistan's own requirements, gypsum plaster can also be exported to Dubai, Saudi Arabia, Afghanistan and other GCC countries that are facing an unprecedented construction boom.

## 9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyse the commercial viability of Plaster of Paris Plant. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Balance Sheet and Cash Flow Statement are also attached as annexure.

### 9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 56.350 million in the year one. The capacity utilization during year one is worked out at 70% with 5% increase in subsequent years up to the maximum capacity utilization of 95% in year 6.

The following table shows internal rate of return, payback period and net present value of the proposed venture.

**Table 2: Project Economics**

Description	Details
Internal Rate of Return (IRR)	40%
Payback Period (yrs.)	3.64
Net Present Value (Rs.)	59,005,654

Calculation of break-even analysis is as follows:

**Table 3 :Breakeven (100% Equity Based)**

Break-Even Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break-Even Revenue	51,881,048	43,595,242	39,316,079	36,580,441	34,843,965	34,888,877	34,813,825	34,674,857	34,846,908	35,297,338
Break-Even Units	6,485,131	4,954,005	4,061,578	3,435,428	2,974,862	2,707,906	2,456,437	2,224,211	2,032,042	1,871,190
Margin of Safety	8%	37%	52%	61%	68%	73%	75%	78%	80%	81%

However, for the purposes of further explanation the Project Economics based on Debt:Equity (i.e. 50:50) Model has also been computed. On the basis of Debt :Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provide in the table below.

**Table 4: Project Economics Based on Debt:Equity (50%:50%)**

Description	Details
Internal Rate of Return (IRR)	36%
Payback Period (Yrs.)	4.04
Net Present Value (Rs.)	65,193,889

The financial assumptions for Debt: Equity are as follows:

**Table 5: Financial Assumptions for Debt:Equity Model**

Description	Details
Debt (50%)	18,719,554
Equity (50%)	18,719,554
Interest Rate on Debt	12%
Debt Tenure	5 Years
Debt Payment / Year	2



The projected Income Statement, Balance Sheet and Cash Flow Statement attached as annexures are based on 100% Equity Based Model.

## 9.2 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

**Table 6: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Building/Infrastructure	23,212,150
Plant and Machinery	5,388,000
Furniture & Fixture	663,500
Pre-operating Cost	210,000
Office vehicles	2,525,000
Computer equipment	220,000
<b>Total Capital Cost</b>	<b>32,218,650</b>
<b>Working Capital</b>	
Raw Material Inventory	1,482,122
Cash	1,481,812
Upfront land lease rental	1,500,000
Equipment spare part inventory	5,870
Upfront insurance payment	276,955
<b>Total Working Capital</b>	<b>4,746,759</b>
<b>Total Project Cost</b>	<b>36,965,409</b>

## 9.3 Space Requirement

The space requirement for the proposed Plaster of Paris Plant is estimated considering various facilities including management office, plant area, storage, packing area and open space, etc. Land will be acquired on lease and the details of space requirement and cost related to building is given below.

**Table 7: Space Requirement**

Description	Estimated Area (Sqft)	Cost Per Sq ft (Rs.)	Total Cost (Rs.)
Management Building	500	2,500	1,250,000
Plant Area	6,000	1,000	6,000,000
Store	5,000	1,000	5,000,000
Workers Rest Room	250	1,500	375,000
Packing Department	3,000	1,500	4,500,000
Labor Kitchen / Cafeteria	900	2,500	2,250,000
Guard Room	225	1,800	405,000
Labor Washrooms	144	1,800	259,200
Boundary Wall	225	1,700	382,500
Wapda Room	225	3,000	675,000
Electric Room for Control Panel	225	3,000	675,000
Pavements	1,000	150	150,000
Grounds	4,806	75	360,450
Main Gate			480,000
Design & Engineering Charges			450,000
<b>Total</b>	<b>22,500</b>		<b>23,212,150</b>

Approximately 5 kanal land will be acquired on lease at the rate of Rs. 300,000 per kanal.

#### 9.4 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

**Table 8: Machinery & Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Roller Dryer with Blowers	1	1,850,000	1,850,000
Grinding Machines	1	1,535,000	1,535,000
Weighing Machine	1	15,000	15,000
Hammer Crusher	1	735,000	735,000
Welding Plant	1	40,000	40,000
Electric Panel / Change over	1	95,000	95,000

Generator 50 KVA	1	1,100,000	1,100,000
Safety Switch Board	1	18,000	18,000
<b>Total</b>			<b>5,388,000</b>

## 9.5 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below.

**Table 9: Furniture & Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Furniture	1	250,000	250,000
Renovations & Fixtures	600	75	45,000
Telephone exchange	1	20,000	20,000
Telephones	1	1,500	1,500
Fans	32	6,000	192,000
LED Lights	80	500	40,000
Water Dispenser	1	16,000	16,000
Exhaust fans	2	4,500	9,000
Air conditioners (1.5 ton Split)	1	90,000	90,000
<b>Total</b>			<b>663,500</b>

## 9.6 Computer Equipment Requirement

Following office and computer equipment will be required for the project;

**Table 10: Computer Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	1	120,000	120,000
Computers with UPS	1	40,000	40,000
Computer printers and scanner	2	30,000	60,000
<b>Total</b>			<b>220,000</b>

## 9.7 Office Vehicles

Detail of vehicle required for the unit is given in table below;

**Table 11: Office Vehicles requirements**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Mini Truck	1	2,525,000	2,525,000

## 9.8 Human Resource Requirement

To run operations of “Plaster of Paris Plant” smoothly, details of human resources required along with the number of employees and monthly salaries are recommended as under;

**Table 12: Human Resource Requirement**

Description	No. of Employees	Monthly Salary per person (Rs.)	Total Monthly Salary
Owner/Manager	1	70,000	70,000
Supervisor	1	45,000	45,000
Accountant	1	25,000	25,000
Roller Dryer Operator	1	40,000	40,000
Grinding Machines Operator	1	25,000	25,000
Weighing Machine Operator	1	20,000	20,000
Hammer Crusher Operator	2	25,000	50,000
Welding Plant Operator	2	20,000	40,000
Packing Department	4	17,500	70,000
Helpers	11	17,500	192,500
Electrician	1	22,000	22,000
Security Guard	1	17,500	17,500
Technician	1	30,000	30,000
<b>Total</b>	<b>28</b>		<b>647,000</b>

## 9.9 Utilities and other costs

An essential cost to be borne by the project is the cost of electricity. The electricity expense is estimated to be around Rs. 124,396 (Direct & In-direct) per month. Furthermore, promotional expense being essential for marketing of Plaster of Paris Plant is estimated as 1% of revenue.

## 9.10 Raw Material Requirements

Gypsum is the main raw material for producing Plaster of Paris. Large reserves of gypsum are present in the salt range of Punjab, Kohat and Bannu region of Khyber Pakhtunkhwa, Suleiman range of D.G Khan in Punjab and Sibi region in Baluchistan. Rocks of high-quality gypsum as per the production requirements can be procured from the mining businesses established in these areas.

### 9.11 Revenue Generation

Based on the capacity utilization of 70%, sales revenue during the first year of operations is estimated as under.

**Table 13: Revenue Generation – Year 1**

Description	No. of Units Produced Kgs	Finished Goods Inventory (Kgs.)	Units available for Sale (Kgs.)	Sale Price/Kg (Rs.)	Sales Revenue (Rs.)
Plaster of Paris	7,350,000	306,250	7,043,750	8	56,350,000
<b>Total</b>					<b>56,350,000</b>

## 10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

**Table 14: Suppliers**

Name of Supplier	Address	Phone
Mr. Mehtab Khan Afridi	Murshid abad shareef chowk, Kohat Rd Peshawar	0345-9112690
Umer Khalid Rao	Sharif Garden Lahore, Punjab	0332-8738290

## 11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
Government of Pakistan	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
Ministry of Industries & Production	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
Government of Punjab	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
Government of Khyber Pakhtunkhwa	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
Government of Baluchistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Government of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
Government of Azad Jammu Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>

Trade Development Authority of Pakistan (TDAP)	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
Security and Exchange Commission of Pakistan (SECP)	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
State Bank of Pakistan (SBP)	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
Pakistan Mineral Development Corporation	<a href="http://www.pmdc.gov.pk">www.pmdc.gov.pk</a>

## 12 ANNEXURES

### 12.1 Income Statement

Calculations	SMEDA									
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	56,350,000	69,107,500	81,100,250	94,800,475	110,429,743	128,236,859	141,370,568	155,507,625	171,058,387	188,164,226
<i>Cost of sales</i>										
Cost of goods sold	34,162,188	39,992,039	44,798,882	49,986,428	55,580,733	61,609,501	64,832,152	68,073,760	71,477,448	75,051,320
Packing Cost	1,408,750	1,649,156	1,847,377	2,061,296	2,291,989	2,540,598	2,673,491	2,807,165	2,947,524	3,094,900
Material Transportation Cost	3,592,313	4,205,348	4,710,810	5,256,305	5,844,572	6,478,525	6,817,402	7,158,272	7,516,185	7,891,994
Direct labor	5,790,000	6,353,723	6,972,330	7,651,166	8,396,094	9,213,550	10,110,594	11,094,976	12,175,198	13,360,593
Machinery maintenance	140,875	164,916	184,738	206,130	229,199	254,060	267,349	280,717	294,752	309,490
Direct electricity	1,294,474	1,525,630	1,790,072	2,092,147	2,436,736	2,829,321	3,112,253	3,423,478	3,765,826	4,142,409
Total cost of sales	46,388,599	53,890,812	60,304,208	67,253,471	74,779,322	82,925,554	87,813,240	92,838,367	98,176,933	103,850,706
Gross Profit	9,961,401	15,216,688	20,796,042	27,547,004	35,650,420	45,311,304	53,557,327	62,669,258	72,881,454	84,313,520
<i>General administration &amp; selling expenses</i>										
Administration expense	1,974,000	2,166,191	2,377,095	2,608,532	2,862,503	3,141,200	3,447,032	3,782,639	4,150,923	4,555,062
Land lease rental expense	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150	2,415,765	2,657,341	2,923,075	3,215,383	3,536,921
Electricity expense	198,282	218,110	239,922	263,914	290,305	319,336	351,269	386,396	425,036	467,539
Water expense	157,920	173,295	190,168	208,683	229,000	251,296	275,763	302,611	332,074	364,405
Travelling expense	98,700	108,310	118,855	130,427	143,125	157,060	172,352	189,132	207,546	227,753
Communications expense (phone, fax, mail, internet, etc.)	197,400	216,619	237,709	260,853	286,250	314,120	344,703	378,264	415,092	455,506
Office vehicles running expense	75,750	83,325	91,658	100,823	110,906	121,996	134,196	147,615	162,377	178,615
Office expenses (stationary, entertainment, janitorial services, etc.)	371,945	437,312	511,882	596,827	693,461	803,254	881,460	967,280	1,061,455	1,164,800
Promotional expense	563,500	507,150	456,435	410,792	369,712	332,741	299,467	269,520	242,568	218,311
Insurance expense	276,955	240,422	203,889	167,356	130,823	94,290	200,681	150,511	100,341	50,170
Professional fees (legal, audit, consultants, etc.)	140,875	172,769	202,751	237,001	276,074	320,592	353,426	388,769	427,646	470,411
Depreciation expense	3,475,365	3,475,365	3,475,365	3,475,365	3,475,365	3,898,952	3,898,952	3,898,952	3,898,952	3,898,952
Amortization of pre-operating costs	42,000	42,000	42,000	42,000	42,000	-	-	-	-	-
Miscellaneous expense 1	98,700	108,310	118,855	130,427	143,125	157,060	172,352	189,132	207,546	227,753
Subtotal	9,171,392	9,599,178	10,081,582	10,629,499	11,248,799	12,327,661	13,188,993	13,973,897	14,846,939	15,816,199
Operating Income	790,009	5,617,510	10,714,460	16,917,505	24,401,621	32,983,643	40,368,335	48,695,360	58,034,516	68,497,321
Other income (interest on cash)	82,176	279,691	732,213	1,424,042	2,418,272	3,683,435	5,334,711	7,476,904	10,064,438	13,344,947
Earnings Before Interest & Taxes	872,185	5,897,201	11,446,672	18,341,547	26,819,893	36,667,078	45,703,046	56,172,264	68,098,954	81,842,269
Earnings Before Tax	872,185	5,897,201	11,446,672	18,341,547	26,819,893	36,667,078	45,703,046	56,172,264	68,098,954	81,842,269
Tax	37,219	1,189,160	3,126,335	5,539,541	8,506,962	11,953,477	15,116,066	18,780,292	22,954,633	27,764,794
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>834,967</b>	<b>4,708,041</b>	<b>8,320,337</b>	<b>12,802,006</b>	<b>18,312,931</b>	<b>24,713,601</b>	<b>30,586,980</b>	<b>37,391,972</b>	<b>45,144,320</b>	<b>54,077,475</b>

## 12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	1,481,812	2,626,995	11,357,557	25,253,069	45,949,054	74,964,524	109,207,223	157,528,326	216,316,855	286,905,048	380,342,325
Accounts receivable		2,315,753	2,577,894	3,086,461	3,614,398	4,217,059	4,904,108	5,539,879	6,100,237	6,710,261	7,381,287
Finished goods inventory		2,016,896	2,251,705	2,519,236	2,809,113	3,123,034	3,462,825	3,658,885	3,868,265	4,090,706	4,327,113
Equipment spare part inventory	5,870	7,215	8,486	9,943	11,608	13,510	14,928	16,458	18,145	20,005	-
Raw material inventory	1,482,122	1,821,802	2,142,812	2,510,489	2,931,027	3,411,400	3,769,334	4,155,691	4,581,649	5,051,268	-
Pre-paid annual land lease	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150	2,415,765	2,657,341	2,923,075	3,215,383	3,536,921	-
Pre-paid insurance	276,955	240,422	203,889	167,356	130,823	94,290	200,681	150,511	100,341	50,170	-
Total Current Assets	4,746,759	10,679,083	20,357,344	35,543,053	57,642,173	88,239,582	124,216,441	173,972,825	234,200,875	306,364,379	392,050,724
<i>Fixed assets</i>											
Building/Infrastructure	23,212,150	20,890,935	18,569,720	16,248,505	13,927,290	11,606,075	9,284,860	6,963,645	4,642,430	2,321,215	-
Machinery & equipment	5,388,000	4,849,200	4,310,400	3,771,600	3,232,800	2,694,000	2,155,200	1,616,400	1,077,600	538,800	-
Furniture & fixtures	663,500	597,150	530,800	464,450	398,100	331,750	265,400	199,050	132,700	66,350	-
Office vehicles	2,525,000	2,020,000	1,515,000	1,010,000	505,000	-	3,578,553	2,683,915	1,789,277	894,638	-
Computer equipment	220,000	176,000	132,000	88,000	44,000	-	311,795	233,846	155,897	77,949	-
Total Fixed Assets	32,008,650	28,533,285	25,057,920	21,582,555	18,107,190	14,631,825	15,595,808	11,696,856	7,797,904	3,898,952	-
<i>Intangible assets</i>											
Pre-operation costs	210,000	168,000	126,000	84,000	42,000	-	-	-	-	-	-
Total Intangible Assets	210,000	168,000	126,000	84,000	42,000	-	-	-	-	-	-
<b>TOTAL ASSETS</b>	<b>36,965,409</b>	<b>39,380,368</b>	<b>45,541,264</b>	<b>57,209,608</b>	<b>75,791,363</b>	<b>102,871,407</b>	<b>139,812,249</b>	<b>185,669,681</b>	<b>241,998,779</b>	<b>310,263,330</b>	<b>392,050,724</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable		1,542,774	1,806,469	2,028,141	2,268,349	2,528,500	2,802,264	2,956,650	3,113,484	3,279,082	3,224,207
Total Current Liabilities	-	1,542,774	1,806,469	2,028,141	2,268,349	2,528,500	2,802,264	2,956,650	3,113,484	3,279,082	3,224,207
<i>Other liabilities</i>											
Deferred tax		37,219	1,226,379	4,352,714	9,892,255	18,399,217	30,352,694	45,468,760	64,249,052	87,203,685	114,968,479
Total Long Term Liabilities	-	37,219	1,226,379	4,352,714	9,892,255	18,399,217	30,352,694	45,468,760	64,249,052	87,203,685	114,968,479
<i>Shareholders' equity</i>											
Paid-up capital	36,965,409	36,965,409	36,965,409	36,965,409	36,965,409	36,965,409	36,965,409	36,965,409	36,965,409	36,965,409	36,965,409
Retained earnings		834,967	5,543,008	13,863,345	26,665,351	44,978,282	69,691,883	100,278,863	137,670,835	182,815,155	236,892,630
Total Equity	36,965,409	37,800,375	42,508,416	50,828,754	63,630,760	81,943,690	106,657,291	137,244,271	174,636,243	219,780,563	273,858,038
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>36,965,409</b>	<b>39,380,368</b>	<b>45,541,264</b>	<b>57,209,608</b>	<b>75,791,363</b>	<b>102,871,407</b>	<b>139,812,249</b>	<b>185,669,681</b>	<b>241,998,779</b>	<b>310,263,330</b>	<b>392,050,724</b>



## 12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		834,967	4,708,041	8,320,337	12,802,006	18,312,931	24,713,601	30,586,980	37,391,972	45,144,320	54,077,475
Add: depreciation expense		3,475,365	3,475,365	3,475,365	3,475,365	3,475,365	3,898,952	3,898,952	3,898,952	3,898,952	3,898,952
amortization of pre-operating costs		42,000	42,000	42,000	42,000	42,000	-	-	-	-	-
Deferred income tax		37,219	1,189,160	3,126,335	5,539,541	8,506,962	11,953,477	15,116,066	18,780,292	22,954,633	27,764,794
Accounts receivable		(2,315,753)	(262,140)	(508,567)	(527,938)	(602,661)	(687,049)	(635,770)	(560,358)	(610,024)	(671,026)
Finished goods inventory		(2,016,896)	(234,810)	(267,531)	(289,877)	(313,921)	(339,791)	(196,060)	(209,380)	(222,440)	(236,407)
Equipment inventory	(5,870)	(1,345)	(1,271)	(1,456)	(1,665)	(1,902)	(1,418)	(1,530)	(1,687)	(1,860)	20,005
Raw material inventory	(1,482,122)	(339,680)	(321,010)	(367,677)	(420,538)	(480,372)	(357,935)	(386,357)	(425,958)	(469,619)	5,051,268
Advance insurance premium	(276,955)	36,533	36,533	36,533	36,533	36,533	(106,391)	50,170	50,170	50,170	50,170
Accounts payable		1,542,774	263,695	221,672	240,208	260,151	273,764	154,386	156,834	165,598	(54,875)
Cash provided by operations	(1,764,947)	1,295,183	8,895,563	14,077,012	20,895,635	29,235,085	39,347,211	48,586,837	59,080,837	70,909,731	89,900,356
<i>Financing activities</i>											
Add: land lease expense		1,500,000	1,650,000	1,815,000	1,996,500	2,196,150	2,415,765	2,657,341	2,923,075	3,215,383	3,536,921
Land lease payment	(1,500,000)	(1,650,000)	(1,815,000)	(1,996,500)	(2,196,150)	(2,415,765)	(2,657,341)	(2,923,075)	(3,215,383)	(3,536,921)	-
Issuance of shares	36,965,409	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	35,465,409	(150,000)	(165,000)	(181,500)	(199,650)	(219,615)	(241,576)	(265,734)	(292,308)	(321,538)	3,536,921
<i>Investing activities</i>											
Capital expenditure	(32,218,650)	-	-	-	-	-	(4,862,935)	-	-	-	-
Cash (used for) / provided by investing activities	(32,218,650)	-	-	-	-	-	(4,862,935)	-	-	-	-
<b>NET CASH</b>	<b>1,481,812</b>	<b>1,145,183</b>	<b>8,730,563</b>	<b>13,895,512</b>	<b>20,695,985</b>	<b>29,015,470</b>	<b>34,242,699</b>	<b>48,321,103</b>	<b>58,788,529</b>	<b>70,588,193</b>	<b>93,437,277</b>

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

Description	Details
Travelling Expenses	5% of administration expense
Communication Expenses	10% of administration expense
Office expenses (stationery, entertainment, janitorial services, etc.)	27% of administration expense
Promotional expense	1% of revenue
Operating costs growth rate	10%
Depreciation Method	Straight Line
Depreciation on Building and Infrastructure	10%
Depreciation on Machinery & Equipment	10%
Depreciation on Furniture and Fixture	10%
Depreciation on Office Equipment	20%
Depreciation on Office Vehicle	20%
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Wage Growth Rate	10%

### 13.2 Production Cost Assumptions

Description	Details
Gypsum Cost	Rs. 5 / Kg
Transportation of Gypsum Cost	Rs. 0.51 / Kg
Plaster of Paris Packing Cost	Rs. 0.20 / Kg
Cost of Goods Sold Growth Rate	5%

### 13.3 Revenue Assumptions

Description	Details
Growth in Sales Price	10%
Days Operational / Year	300
Hours Operational / Day	8

# Small and Medium Enterprises Development Authority

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