



**Pre-feasibility Study**

# **LIMESTONE PROCESSING UNIT**

**June 2022**

*“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***

Document No.	PREF-NO
Revision	No. 1
Prepared by	SMEDA-Balochistan
Revision Date	June 2022
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## 2 EXECUTIVE SUMMARY

**Limestone Processing Unit** is proposed to be located at Quetta, Loralai, Khuzdar, Marble City Gadani, Hub, and District Chaghi / Dalbandin. However, such a plant could be established in other parts of the country provided the following main conditions are fulfilled such as: raw material and man power availability, accessibility to markets and reasonable trend of using dimensional stones in construction industry. The facility should easily be accessible to the target customers.

Product(s) include 1-inch-thick tiles, Slabs and Tiles of 6"x6", 11.5"x11.5" and 11.5"x23" or customized according to customer needs.

The unit has the capacity of Producing **350,000 unit** annually and will be operational for 330 days a year and 8 hours a day in 1 shift initial utilization **70%** and will increase it by **5%** annually.

The total project investment is **Rs.33,092,446/-** with an Internal Rate of Return (IRR) of **40%** and Net Present Value (NPV) of **42,829,074/-** **payback period is 3.46.**

## 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 **Limestone Processing unit** 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 on, which form basis of any Investment Decision.

## **5 BRIEF DESCRIPTION OF PROJECT & PRODUCT**

The colour and shades of Limestone found in Pakistan are widely accepted in the local markets and have the capability of international acceptance due to their similarity with the stones used in decorative process, which have widespread demand in the global markets. Limestone is one of the favourites in the world markets and is used for facings, floorings and decorative items. These various shades & colours if properly designed & utilized for development of Limestone can give value added finished goods of significant economic importance. These can also be exported to international market and will boost GDP.

Limestone is included in the list of largest minerals extracted among marble, chromite, coal, rock salt, lime stone, china clay, dolomite, fire clay, gypsum, silica sand etc. Since 1990 mining & quarrying has consistently contributed 0.5 percent to the Gross Domestic Product.

Limestone processing is gaining popularity due to increase in its usage in construction industry. Today almost all the modern architectural designs of houses and plazas include the final touch of beautiful shades of limestone in exterior as well as interior portions. Even though reasonable number of limestone processing

units are working in city but there is still enormous demand for a fully equipped limestone processing plant. The new plant would not only explore the construction industry within the city, but it would also be able to full fill the orders from the adjoining areas. Moreover, Government of Balochistan has established the marble city at Gaddani, where number of incentives has been announced for the investors. Establishment of such units in the marble city will be more beneficial being the gateway to the export markets.

All natural stones including limestone, marble, granite and slate which can be cut to sizes, polished and used for construction purposes, are referred to as dimensional stones. Each of these stones represents a family of similar stones, with various combinations of different minerals. The major distinction is made on the basis of their base minerals which are Calcium compounds (calcareous) for marbles, Silica compounds (siliceous) for granite and Shale clay for slate.

Dimensional stones are characterized by aesthetics/acoustics and practicality in use. Their apparent occurrences have lent them to many uses for centuries particularly construction and allied uses. Their different chemical, mineralogical, and physical properties determine their appropriate extraction and processing requirements, in addition to bearing upon their end use.

Limestone tiles being a new trait introduced in Pakistan has great potential and since it can also utilize the processing wastes including uneven small tiles, strips and slabs. The project would not only focus the construction industry within Quetta city but other parts of the province as well. Once the facility starts at its full capacity, it could also supply strips, tiles and slabs to other parts of the country. Cheap raw material is also abundantly available. Currently the Limestone processors are producing very professionally through proper designing and colour combination so as to fetch better prices and more sales volume.

Major categories for usage of dimensional stones are architectural works, trade and sculptures etc. In the architectural work that include construction and structural works total share of the dimensional stone is 70% while in the decorative, sculptures and memorial art etc. its share is 30%. According to their peculiar characteristics, including weather effects, colour fading, load tolerance, edge cuts, water absorption, colour choice, hygienic factor, hardness etc. various type of dimensional stones are used in different locations and places.

The business can be started as sole proprietorship or partnership because of great potential involved. Furthermore, comparatively fewer complications are involved in forming, administering and running the sole proprietorship or partnership businesses.

## Marketability of Dimension Stones/Stone Selection Criteria

Selection of dimensional stone is normally a function of esthetics attached with the particular purpose and end use. They are graded on the following features:

### 1. Colour

Colour is the most important esthetical element that determines chances of marketability of the product. Preferences for colour of dimensional stone vary from market to market and time to time for stone type. At present, various shades in white colour of marble and white & green in onyx are preferred in the European markets. Middle East and Far Eastern markets are interested in white, black & beige colours in marble and green colours in onyx.

### 2. Pattern

The pattern is given by the weave i.e., by the spatial distribution of the elements comprising the rocks. The pattern is derived from overlapping layers of different colours. Veined pattern is caused by veins crossing the ground mass of rock. Either giving the material, a well-defined direction or forming more or less uneven weave, in case of randomly arranged veins. In the veined pattern, normally found in marble, cutting direction is very important as this highly influences its appearance.

### 3. Grain Size

This defines the size and shape of the lithoid elements that constitute the rock. There are three major categories of the grain size of dimensional stone; fine grain, medium grain and large grain material. The grain size does not usually influence the esthetics of the material but has its impacts on the usage. Fine grain material has micro hardness and can be applied in the load bearing areas and sharp corners while medium and especially the large grain material is avoided to be used in the load bearing areas and sharp corners in the wake of its breakage and cracks.

Following key parameters must be addressed as per pre-feasibility study under preparation

- **Technology:** This proposed unit with local processing machines including cutting, splitting, resizing will produce limestone stones of three types, namely, the unpolished tiles with uneven sides, unpolished tiles with even sides, and polished even sided tiles.
- **Location:** The unit will be located at or near Limestone processing clusters at Gujranwala, Lahore, Lasbela, Multan, Karachi, Peshawar, Rawalpindi, Rawat,

Risalpur, Quetta, or in areas where basic infrastructure is available for easy transportation of raw material and finished goods.

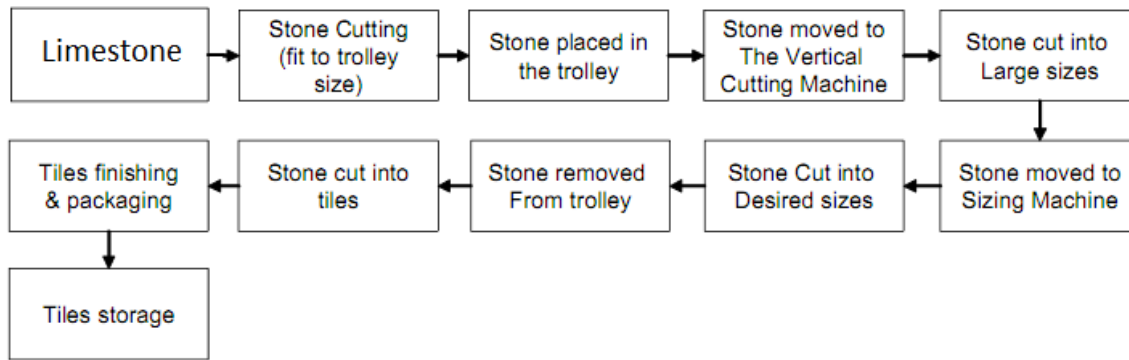
- **Product:** The unit will initially process raw stone of weight from 10 to 15 ton. Cutting them in sheet as per the size of the stone and dimension in which the stone can be cut with minimal waste. The main focus will on dimension in which the beauty of the stone remains seen when installed. Though the project will be capable of producing many varieties of Limestone with the small Tiles to a minimum of 4" Width x 12" Length, but its main focus will be upon the highly demanded sizes.
- **Target Market:** In addition to local markets in Karachi, Lahore and Islamabad an enormous export market for the Pakistani gemstones exists in Europe, USA, Middle East, Hong Kong, Taiwan, etc.
- **Employment Generation:** The proposed project will provide direct employment to 15 people.

### 5.1 Production Process Flow

When a large size stone (approximately 10 to 15 ton) reaches the factory, it is cut into the sizes (using gang saw) fit to trolley size. Stone is fixed in the trolley and moved to vertical cutting machine to further divide it into small (but still large enough to handle) sizes. These stone pieces are then brought to the sizing machine to cut them into desired size of tiles blocks. Tiles blocks are then cut into tiles of desired thickness which are then stacked using trolleys in the storage area where packaging is performed.

The plant would process (cut and polish) raw marble blocks and would produce three types of products i.e., limestone strips, limestone slabs and limestone tiles. The plant would produce tiles of various sizes from the strips depending on the orders of customers.





## 5.2 Possible Product Categories after Processing

- **Slabs**

Slabs are large semi processed sheets of marble stone with varied sizes and thickness of 2 inches. They are further processed in the local industry or exported to the international markets. Slabs are cut on by gang saws from large blocks of Limestone. This product is used for table tops, kitchen tops, wall facing, flooring and other allied purposes. Price of slab varies with the quality of material and the size of the sheet.

- **Unpolished Tiles**

These are processed and sold by units normally lacking machinery to finish and section the material and are available in different sizes, colours, and shades. These tiles are polished normally after application at the desired surface. Main attraction for the consumer for this product is its low price. Unpolished tiles are sold comparatively at low prices than the polished tiles to individuals and other small processing units.

- **Polished Tiles**

These are the fully processed tiles sold in the market at competitively higher prices, which depend on size, colour, & shades.

## 5.3 Installed and Operational Capacities

Installed capacity of the project will be 350,000 sq. ft/ year on the basis of daily shift of 8 hours, whereas the production capacity of year 01 will be 245,000 sq.ft.

## **6 CRITICAL FACTORS**

The following factors should be considered thoroughly:

- Efficient and cost-effective procurement system for raw material.
- Availability and retention of skilled labour.
- Factory location must take into account the availability of electric power and water supply, proximity to supply sources and markets, and optimum visibility and ease of access by customers.
- Sufficient inventory of cutting blades and proper maintenance of machinery.
- Effective market linkages, especially with civil contractors focusing upon construction of houses for lower middle and middle class.
- Customer services through advice on cost effective transportation and maintaining a list of transporters for the purpose. Clear communication to the customers about expected colour variation.
- Continuous productivity improvement and energy efficiency through best practices on the floor.

## **7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT**

It is suitable to establish the plant in Quetta, Gaddani, Hub, Khuzdar, Loralai and Chagai. However, such plant could be established in other parts of the country provided the main conditions are fulfilled such as raw material and man power availability, accessibility to markets, and reasonable demand & usage of dimensional stones.

## **8 POTENTIAL TARGET CUSTOMERS / MARKETS**

Limestone products are famous worldwide for their application in construction industry as well as for decorative purposes. Promising export markets for limestone are Central Asian Republics, United States of America, and Australia. Domestic market also carries a great untapped potential for Limestone tiles with a target market comprising architects, builders, corporate customers, domestic consumers and exporters of Faisalabad, Gujranwala, Hyderabad, Islamabad, Rawalpindi, Karachi, Kohat, Lahore, Lasbela, Nowshehra, Peshawar, Sargodha, Sialkot, and Quetta.

## 9 PROJECT COST SUMMARY

### 9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 54,002,083 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%.

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

**Table 1: Project Economics**

Description	Details
Internal Rate of Return (IRR)	40%
Payback Period (yrs.)	3.46
Net Present Value (Rs.)	42,829,074

### 9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan;

**Table 2: Project Financing**

Description	Details
Total Equity (30%)	Rs 9,927,734
Bank Loan (70%)	Rs 23,164,712
Markup to the Borrower (%age / annum)	16%
Tenure of the Loan (Years)	5 Years

### 9.3 Project Cost

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

**Table 3: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Land	2,760,000
Building	4,380,000
Plant and Machinery	19,670,000
Furniture & Fixture	580,000
Office Equipment	436,000
Pre-operating Cost	1,815,498
<b>Total Capital Cost</b>	<b>29,641,498</b>
<b>Working Capital</b>	
Equipment spare part inventory	97,830
Raw Material Inventory	1,369,618
Up-front Insurance Payment	983,500
Cash	1,000,000
<b>Total Working Capital</b>	<b>3,450,948</b>
<b>Total Project Cost</b>	<b>33,092,446</b>

### 9.4 Space Requirement

The space requirement for the proposed **Limestone Processing unit** is estimated considering various facilities including management office, production hall, storage, open space, etc. Details of space requirement and cost related to land & building is given below;

**Table 4: Space Requirement**

Description	Estimated Area (Sqft)	Unit Cost (Rs.)	Total Cost (Rs.)
Management Office	400	700	280,000
Production Hall	4,000	700	2,800,000

Store – Finished Goods	2,000	300	600,000
Store – Raw Material	2,000	300	600,000
Open Space	10,000	10	100,000
<b>Total</b>			<b>4,380,000</b>

### 9.5 Machinery & Equipment Requirement

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

**Table 5: Machinery & Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Crane/Lifter	1	5,500,000	5,500,000
Gang Saw	1	6,000,000	6,000,000
H/V Cutter	1	4,000,000	4,000,000
Small Cutting Machine	1	250,000	250,000
Sizer	1	120,000	120,000
Polishing Machine	1	200,000	200,000
Transformer (200 KVA)	1	800,000	800,000
Generator (200 KVA)	1	2,800,000	2,800,000
<b>Total</b>			<b>19,670,000</b>

### 9.6 Furniture & Fixtures Requirement

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

**Table 6: Furniture & Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Tables	2	30,000	60,000
Chairs	8	6,500	52,000
Sitting Benches	2	20,000	40,000
Storage Racks	18	16,000	288,000
Air Conditioners (1.5 ton)	2	60,000	120,000
<b>Total</b>			<b>580,000</b>

## 9.7 Office Equipment Requirement

Following office equipment will be required for **Limestone Processing unit**.

**Table 7: Office Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	1	100,000	100,000
Desktop Computers with UPS	1	55,000	55,000
Printer	1	35,000	35,000
Scanner	1	22,000	2,2000
Telephone Sets	4	6,000	24,000
Photo Copier	1	200,000	200,000
<b>Total</b>			<b>436,000</b>

## 9.8 Human Resource Requirement

In order to run operations of **Limestone Processing Plant** smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

**Table 8: Human Resource Requirement**

Description	No. of Employees	Monthly Salary per person (Rs.)
Plant Manager	1	90,000
Gang Saw Operator	1	35,000
H/V Cutter Operator	1	33,000
Polish Machine Operator	1	28,000
Accounts and Admin Officer	1	35,000
Cutting Machine Operator	2	30,000
Helper	5	23,000
Guards	3	23,000
<b>Total</b>		<b>402,900</b>

### 9.9 Utilities and other costs

An essential cost to be borne by the project is the cost of utilities. The administrative expenses are Rs. 1,000,000 per month which includes the utilities. Furthermore, promotional expense being essential for the marketing of Project unit is estimated as 1% of Revenue that for year 1.

### 9.10 Revenue Generation

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

**Table 9: Revenue Generation – Year 1**

Description	No. of Units Produced (No.)	Finished Goods Inventory (No.)	Units available for Sale (No.)	Sale Price / unit (Rs.)	Sales Revenue (Rs.)
All Purpose	245,000	10,208	234,792	230	54,002,083
<b>Total</b>	<b>245,000</b>				<b>54,002,083</b>

## 10. CONTACT DETAILS

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

### 10.1 Suppliers

Name of Supplier	Address	Phone	Fax	E-mail	Website
Mr. Zahoor	ZAK Marble Factory Kili Gul Mohammad, Airport Road, Quetta	0300- 9383853		zakakar@y ahoo.com	
Mr. Zafar Zehri	M/s Zafar Zehri Marble Industries (Pvt) Ltd. Mauripur Road Karachi	021- 5863787			
Mr. Ilyas	M/s N-Traders Marble City, Gadani, Lasbela	0346- 2332552			

### 10.2 Technical Experts / Consultants

Name of Expert/Organization	Address	Phone	Fax	E-mail	Website
Mr. Farooq Maqsi	F.L 7 Marina aviation Block-2 Clifton Karachi	0301- 3719957			
Mr. Toufique Ahmad	PASDEC Islamabad				
Mr. Mehtab Afridi	Dimension Stone Center, PCSIR Labs	0345- 9112690			



## 11 USEFUL WEB LINKS

Links of Federal & Provincial Government, Semi Government and other (sector & Cluster based) Development organizations are to be given under this heading so to enable potential investors to get benefit from the services offered. Web links of various organizations are given as example however, links of only relevant organizations should be given;

<b>Small &amp; Medium Enterprises Development Authority (SMEDA)</b>	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
<b>Government of Pakistan</b>	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
<b>Ministry of Industries &amp; Production</b>	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
<b>Ministry of Education, Training &amp; Standards in Higher Education</b>	<a href="http://moptt.gov.pk">http://moptt.gov.pk</a>
<b>Government of Punjab</b>	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
<b>Government of Sindh</b>	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
<b>Government of Khyber Pakhtunkhwa</b>	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
<b>Government of Balochistan</b>	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
<b>Government of Gilgit Baltistan</b>	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
<b>Government of Azad Jamu Kashmir</b>	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
<b>Trade Development Authority of Pakistan (TDAP)</b>	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
<b>Security Commission of Pakistan (SECP)</b>	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
<b>Federation of Pakistan Chambers of Commerce and Industry (FPCCI)</b>	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
<b>State Bank of Pakistan (SBP)</b>	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
<b>Punjab Small Industries Corporation</b>	<a href="http://www.psic.gop.pk">www.psic.gop.pk</a>
<b>Sindh Small Industries Corporation</b>	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
<b>Pakistan Horticulture Development and Export Company (PHDEC)</b>	<a href="http://www.phdec.org.pk">www.phdec.org.pk</a>
<b>Punjab Vocational Training Council (PVTC)</b>	<a href="http://www.pvtc.gop.pk">www.pvtc.gop.pk</a>
<b>Technical Education and Vocational Training Authority (TEVTA)</b>	<a href="http://www.tevta.org">www.tevta.org</a>
<b>Pakistan Readymade Garment Technical Training Institute</b>	<a href="http://www.prgmea.org/prgtti/">www.prgmea.org/prgtti/</a>
<b>Livestock &amp; Dairy Development Department, Government of Punjab.</b>	<a href="http://www.livestockpunjab.gov.pk">www.livestockpunjab.gov.pk</a>
<b>Punjab Industrial Estates (PIE)</b>	<a href="http://www.pie.com.pk">www.pie.com.pk</a>
<b>Faisalabad Industrial Estate Development and Management Company (FIEDMC)</b>	<a href="http://www.fiedmc.com.pk">www.fiedmc.com.pk</a>

## 12 ANNEXURES

### 12.1 Income Statement

Statement Summaries										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Rs. in actuals									
Revenue	54,002,083	66,228,021	77,721,073	90,850,455	105,828,503	122,893,656	135,480,127	149,028,140	163,930,954	180,324,050
Cost of goods sold	40,566,250	47,335,174	52,886,363	58,887,990	65,372,566	72,374,857	76,581,159	80,871,701	85,421,701	90,248,507
Gross Profit	13,435,833	18,892,847	24,834,710	31,962,465	40,455,937	50,518,799	58,898,969	68,156,439	78,509,253	90,075,543
<i>General administration &amp; selling expenses</i>										
Administration expense	-	-	-	-	-	-	-	-	-	-
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	-	-	-	-	-	-	-	-	-	-
Travelling & Comm. expense (phone, fax, etc.)	-	-	-	-	-	-	-	-	-	-
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, etc.)	-	-	-	-	-	-	-	-	-	-
Promotional expense	540,021	662,280	777,211	908,505	1,058,285	1,228,937	1,354,801	1,490,281	1,639,310	1,803,240
Insurance expense	983,500	885,150	786,800	688,450	590,100	491,750	393,400	295,050	196,700	98,350
Professional fees (legal, audit, etc.)	270,010	331,140	388,605	454,252	529,143	614,468	677,401	745,141	819,655	901,620
Depreciation expense	2,550,200	2,550,200	2,550,200	2,550,200	2,550,200	2,617,480	2,617,480	2,617,480	2,617,480	2,617,480
Amortization expense	363,100	363,100	363,100	363,100	363,100	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	1,620,063	1,986,841	2,331,632	2,725,514	3,174,855	3,686,810	4,064,404	4,470,844	4,917,929	5,409,721
Subtotal	6,326,893	6,778,711	7,197,548	7,690,020	8,265,682	8,639,445	9,107,486	9,618,796	10,191,073	10,830,412
Operating Income	7,108,940	12,114,136	17,637,162	24,272,445	32,190,254	41,879,355	49,791,483	58,537,643	68,318,180	79,245,131
Other income	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of assets	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	7,108,940	12,114,136	17,637,162	24,272,445	32,190,254	41,879,355	49,791,483	58,537,643	68,318,180	79,245,131
Interest expense	1,514,694	1,215,905	975,915	697,528	374,598	-	-	-	-	-
Earnings Before Tax	5,594,246	10,898,232	16,661,247	23,574,917	31,815,656	41,879,355	49,791,483	58,537,643	68,318,180	79,245,131
Tax	2,293,641	4,468,275	6,831,111	9,665,716	13,044,419	17,170,535	20,414,508	24,000,434	28,010,454	32,490,504
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>3,300,605</b>	<b>6,429,957</b>	<b>9,830,135</b>	<b>13,909,201</b>	<b>18,771,237</b>	<b>24,708,819</b>	<b>29,376,975</b>	<b>34,537,209</b>	<b>40,307,726</b>	<b>46,754,627</b>
Balance brought forward		3,300,605	4,865,281	7,347,708	10,628,455	14,699,846	19,704,333	24,540,654	29,538,932	34,923,329
Total profit available for appropriation	3,300,605	9,730,562	14,695,416	21,256,909	29,399,692	39,408,665	49,081,308	59,077,863	69,846,658	81,677,956
Dividend	-	4,865,281	7,347,708	10,628,455	14,699,846	19,704,333	24,540,654	29,538,932	34,923,329	40,838,978
Balance carried forward	3,300,605	4,865,281	7,347,708	10,628,455	14,699,846	19,704,333	24,540,654	29,538,932	34,923,329	40,838,978

## 12.2 Balance Sheet

Statement Summaries											SMEDA
Balance Sheet											Rs. in actuals
	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	1,000,000	1,488,277	4,050,468	6,671,497	9,740,768	13,094,490	18,619,071	24,706,004	31,054,916	37,658,003	49,695,253
Accounts receivable	-	4,438,527	4,940,963	5,915,716	6,927,597	8,082,697	9,399,541	10,618,101	11,692,121	12,861,333	14,147,466
Finished goods inventory	-	1,763,750	1,977,793	2,209,352	2,459,695	2,730,177	3,022,247	3,190,882	3,369,654	3,559,238	3,760,354
Equipment spare part inventory	97,830	120,251	141,440	165,709	193,467	225,175	248,801	274,303	302,419	333,417	-
Raw material inventory	1,369,618	1,683,514	1,980,157	2,319,924	2,708,540	3,152,448	3,483,213	3,840,242	4,233,867	4,667,839	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	983,500	885,150	786,800	688,450	590,100	491,750	393,400	295,050	196,700	98,350	-
<b>Total Current Assets</b>	<b>3,450,948</b>	<b>10,379,469</b>	<b>13,877,620</b>	<b>17,970,648</b>	<b>22,620,167</b>	<b>27,776,737</b>	<b>35,166,272</b>	<b>42,924,582</b>	<b>50,849,677</b>	<b>59,178,179</b>	<b>67,603,074</b>
<i>Fixed assets</i>											
Land	2,760,000	2,760,000	2,760,000	2,760,000	2,760,000	2,760,000	2,760,000	2,760,000	2,760,000	2,760,000	2,760,000
Building/Infrastructure	4,380,000	3,942,000	3,504,000	3,066,000	2,628,000	2,190,000	1,752,000	1,314,000	876,000	438,000	-
Machinery & equipment	19,670,000	17,703,000	15,736,000	13,769,000	11,802,000	9,835,000	7,868,000	5,901,000	3,934,000	1,967,000	-
Furniture & fixtures	580,000	522,000	464,000	406,000	348,000	290,000	232,000	174,000	116,000	58,000	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	436,000	348,800	261,600	174,400	87,200	-	617,920	463,440	308,960	154,480	-
<b>Total Fixed Assets</b>	<b>27,826,000</b>	<b>25,275,800</b>	<b>22,725,600</b>	<b>20,175,400</b>	<b>17,625,200</b>	<b>15,075,000</b>	<b>13,229,920</b>	<b>10,612,440</b>	<b>7,994,960</b>	<b>5,377,480</b>	<b>2,760,000</b>
<i>Intangible assets</i>											
Pre-operation costs	1,815,498	1,452,399	1,089,299	726,199	363,100	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>1,815,498</b>	<b>1,452,399</b>	<b>1,089,299</b>	<b>726,199</b>	<b>363,100</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>33,092,446</b>	<b>37,107,668</b>	<b>37,692,519</b>	<b>38,872,247</b>	<b>40,608,467</b>	<b>42,851,737</b>	<b>48,396,193</b>	<b>53,537,022</b>	<b>58,844,637</b>	<b>64,555,659</b>	<b>70,363,074</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable	-	3,042,946	3,563,055	4,000,278	4,474,061	4,987,179	5,527,148	5,831,656	6,140,993	6,467,617	6,359,383
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>-</b>	<b>3,042,946</b>	<b>3,563,055</b>	<b>4,000,278</b>	<b>4,474,061</b>	<b>4,987,179</b>	<b>5,527,148</b>	<b>5,831,656</b>	<b>6,140,993</b>	<b>6,467,617</b>	<b>6,359,383</b>
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	-	-	-	-	-	-	-	-	-	-
Long term debt	9,927,734	7,599,404	6,099,471	4,359,549	2,341,239	-	-	-	-	-	-
<b>Total Long Term Liabilities</b>	<b>9,927,734</b>	<b>7,599,404</b>	<b>6,099,471</b>	<b>4,359,549</b>	<b>2,341,239</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Shareholders' equity</i>											
Paid-up capital	23,164,712	23,164,712	23,164,712	23,164,712	23,164,712	23,164,712	23,164,712	23,164,712	23,164,712	23,164,712	23,164,712
Retained earnings	-	3,300,605	4,865,281	7,347,708	10,628,455	14,699,846	19,704,333	24,540,654	29,538,932	34,923,329	40,838,978
<b>Total Equity</b>	<b>23,164,712</b>	<b>26,465,317</b>	<b>28,029,993</b>	<b>30,512,420</b>	<b>33,793,167</b>	<b>37,864,558</b>	<b>42,869,045</b>	<b>47,705,366</b>	<b>52,703,644</b>	<b>58,088,041</b>	<b>64,003,690</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>33,092,446</b>	<b>37,107,668</b>	<b>37,692,519</b>	<b>38,872,247</b>	<b>40,608,467</b>	<b>42,851,737</b>	<b>48,396,193</b>	<b>53,537,022</b>	<b>58,844,637</b>	<b>64,555,659</b>	<b>70,363,074</b>
<i>Note: Total assets value will differ from project cost due to first installment of leases paid at the start of year 0</i>											

(0)

## 12.3 Cash Flow Statement

Statement Summaries Cash Flow Statement											SMEDA
											Rs. in actuals
	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	-	3,300,605	6,429,957	9,830,135	13,909,201	18,771,237	24,708,819	29,376,975	34,537,209	40,307,726	46,754,627
Add: depreciation expense	-	2,550,200	2,550,200	2,550,200	2,550,200	2,550,200	2,617,480	2,617,480	2,617,480	2,617,480	2,617,480
amortization expense	-	363,100	363,100	363,100	363,100	363,100	-	-	-	-	-
Deferred income tax	-	-	-	-	-	-	-	-	-	-	-
Accounts receivable	-	(4,438,527)	(502,436)	(974,753)	(1,011,881)	(1,155,100)	(1,316,844)	(1,218,560)	(1,074,020)	(1,169,212)	(1,286,133)
Finished good inventory	-	(1,763,750)	(214,043)	(231,559)	(250,343)	(270,482)	(292,070)	(168,635)	(178,773)	(189,583)	(201,117)
Equipment inventory	(97,830)	(22,421)	(21,189)	(24,269)	(27,758)	(31,708)	(23,626)	(25,502)	(28,116)	(30,998)	333,417
Raw material inventory	(1,369,618)	(313,896)	(296,643)	(339,767)	(388,616)	(443,908)	(330,765)	(357,029)	(393,625)	(433,971)	4,667,839
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(983,500)	98,350	98,350	98,350	98,350	98,350	98,350	98,350	98,350	98,350	98,350
Accounts payable	-	3,042,946	520,109	437,223	473,783	513,118	539,968	304,508	309,337	326,624	(108,234)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(2,450,948)	2,816,607	8,927,405	11,708,659	15,716,036	20,394,807	26,001,313	30,627,587	35,887,843	41,526,416	52,876,228
<i>Financing activities</i>											
Change in long term debt	9,927,734	(2,328,330)	(1,499,933)	(1,739,922)	(2,018,310)	(2,341,239)	-	-	-	-	-
Change in short term debt	-	-	-	-	-	-	-	-	-	-	-
Change in export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Add: land lease expense	-	-	-	-	-	-	-	-	-	-	-
Land lease payment	-	-	-	-	-	-	-	-	-	-	-
Change in lease financing	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	23,164,712	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing act	33,092,446	(2,328,330)	(1,499,933)	(1,739,922)	(2,018,310)	(2,341,239)	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(29,641,498)	-	-	-	-	-	(772,401)	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by investing acti	(29,641,498)	-	-	-	-	-	(772,401)	-	-	-	-
<b>NET CASH</b>	<b>1,000,000</b>	<b>488,277</b>	<b>7,427,472</b>	<b>9,968,737</b>	<b>13,697,726</b>	<b>18,053,568</b>	<b>25,228,913</b>	<b>30,627,587</b>	<b>35,887,843</b>	<b>41,526,416</b>	<b>52,876,228</b>
Cash balance brought forward		1,000,000	1,488,277	4,050,468	6,671,497	9,740,768	13,094,490	18,619,071	24,706,004	31,054,916	37,658,003
Cash available for appropriation	1,000,000	1,488,277	8,915,749	14,019,205	20,369,223	27,794,336	38,323,403	49,246,658	60,593,848	72,581,332	90,534,231
Dividend	-	-	4,865,281	7,347,708	10,628,455	14,699,846	19,704,333	24,540,654	29,538,932	34,923,329	40,838,978
Cash carried forward	1,000,000	1,488,277	4,050,468	6,671,497	9,740,768	13,094,490	18,619,071	24,706,004	31,054,916	37,658,003	49,695,253

## 13 KEY ASSUMPTIONS

### 13.1 Operating Assumptions

Description	Details
Days operational per month	28
Days operational per year	330

### 13.2 Production Assumptions

Description	Details
Maximum Capacity Utilization	95%
Total Production of the unit per day (Sq.Ft)	1007
Total Production of the unit per month (Sq.Ft)	28,212
Total Production of the unit per year (100%)	350,000

### 13.3 Economy Related Assumptions

Description	Details
Electricity price growth rate	10%
Wage growth rate	10%
Sales growth rate	10%

### 13.4 Cash Flow Assumptions

Description	Details
Accounts Receivable cycle (in days)	30
Accounts payable cycle (in days)	30

# Small and Medium Enterprises Development Authority

## HEAD OFFICE

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